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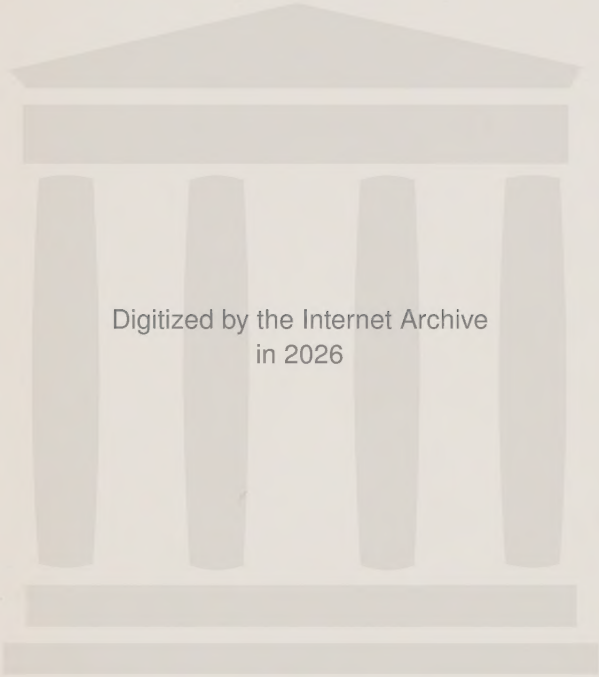
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RIVERSIDE TEXTBOOKS IN EDUCATION

EDITED BY ELLWOOD P. CUBBERLEY

DEAN OF THE SCHOOL OF EDUCATION
LELAND STANFORD JUNIOR UNIVERSITY

AN INTRODUCTION TO THE STUDY OF EDUCATION AND TO TEACHING

BY
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AUTHOR'S PREFACE

TWENTY to twenty-five years ago it was common, in our colleges and universities, to offer a general introductory course in Education, open to practically all students. The course usually covered the more important aspects of the subject as it was then developed, was intended for beginning students in education, and served a useful purpose in opening-up the field to those who knew little or nothing as to what constituted its subject-matter and problems. The present writer offered such a course for several years. It was elected by many university students who had no intention of preparing for teaching, and there is good reason for thinking that it served a useful purpose in giving to future citizens, school-board members, legislators, and parents, as well as to those who prepared for teaching, some intelligent idea as to educational practices, problems, and procedures.

With the rapid development of Education as a subject which took place after about 1906–08, and the coming of additional professors to the department, the course was finally given up, and what had previously been presented in this general introductory course was divided up among six or seven different university courses. Many of these have in turn since been subdivided, until now, generally over the United States, departments and schools of education offer so many different courses that only the student who specializes in education has a chance to learn, in any comprehensive manner, with what education as a whole deals. Even the special student often has difficulty, at first, in grasping relationships and seeing the full significance of the parts he is studying.

With the increase in the specialization of the courses, the general university student has tended to drop out of the education classes. If he has a few elective hours that he can spare for the subject, he is often at a loss to know what courses to elect. If, as sometimes happens, he elects a course on rural education, the junior high school, moral education, the curriculum, vocational education, principles of education, teaching practice, or child hygiene, he finishes the course with some information along one particular line, but with little real conception of the nature and scope and problems of the larger subject of education. As far as helping him later on to deal with his citizenship problems, and especially to become an intelligent school-board member, councilman, member of the legislature, or parent, he has often obtained almost nothing of value. He comes out of the course much as would a scientific student who, desiring to obtain some general idea as to English literature, elected a course on Milton or the Victorian novel; or the English student who, desiring to obtain some general idea as to the field of biology, elected a course on mollusks or marine algæ, or of physics and elected a course on heat.

It seems to the writer that the time has come, in the development of the subject of Education, when we ought to return to the earlier practice and offer to students, not only in universities and colleges, but in normal schools as well, a good general introductory survey course in Education that will set forth briefly for them the main plans for the organization of public education; the place and importance of education in our national life; the important present-day problems of education as they relate to the pupil, the teacher, and the parent; the general nature of the learning and the teaching processes; the educational reorganizations now under way, and the reasons for making them; the scope of the public school system; the problems of rural education;

the problems concerned with educational finance; and the outstanding present-day problems of our educational work. Such a course is intended to orient the beginning and the general student, to give them a good general idea as to what education deals with and is about, and should do for them what the general introductory courses now offered in botany, zoölogy, physics, government, citizenship, law, history, and literature do for the students in these subjects.

Such a general and orienting course is needed especially by those who are preparing for teaching, in our normal schools and teachers colleges, and would prove both useful and interesting to many of those who have already begun their teaching service. Only by means of some such general course as is here outlined will it be possible for either teachers or the general student to obtain any comprehensive idea as to the nature of the many specialized courses now offered in the field of education, as no student can longer afford the time necessary to study them all.

With these ideas in mind this book has been written. After a brief historical survey, the essential nature of education is first presented, and this is followed by a description of the more easily comprehended features of educational organization and administration and supervision. The book then passes to the work and training of the teacher, and then to the more difficult subjects of child development, pupil differences, the learning and teaching processes, scientific school classification, curriculum content, and educational and building reorganization. The recent important extensions of public education are next considered, the new social relations of the schools are described, the scope of the system of public instruction is outlined, and the important place of the college and university in a State system of public instruction is set forth. The problem of the rural child is next taken up, and the solution of the problem is presented.

Finally, the still more difficult questions of school support, taxation for education, increasing costs for schools, and the desirable equalization of burdens and advantages are dealt with. The book closes with a brief setting-forth of the present status of education as an applied science, and the larger unsolved problems that we face. Drawings and maps have often been introduced to give concreteness to the presentation, while the questions for discussion and the problems and exercises will be helpful to the instructor who handles the course.

This book contains sufficient material for a three-unit semester course, or a four- or five-unit quarter course. Excepting probably the first and the last chapters, the instructor will want two recitation periods for each of the chapters. This would carry the course over the period of time indicated above. A good method for using the text with a class will be to assign the chapters for thoughtful reading, and then to test how well this has been done by a series of short true-false and completion tests — that is, true-false not as the pupil thinks, but as the author says. These tests should be given frequently, and at unexpected times. This will keep the students up on the reading. The class time can then be devoted to a discussion of the questions at the end of the chapters, reports on the problems, and to a better understanding of what the text presents.

In the list of collateral readings which are given at the end of each chapter, only a selected few of the more easily accessible references have been included, the thought being that the instructor in such a course as this book presents probably will desire to confine the attention of the students rather closely to the text, and to the questions and problems. In assigning the problems, some guidance will be desirable as to how to go about solving them, and where to secure the needed data. Where use is made of the collateral

reading, it may prove more advantageous to make individual assignments than to turn a large class on a library containing but a few books.

A certain amount of illustrative and supplemental material, such as old and standard textbooks, courses of study, survey reports, some of the better tests and scales, pictures of school buildings and of work being done, and similar materials can advantageously be placed on reference shelves for examination by the students. Pictures and graphs can similarly be hung up for display, and a collection of lantern slides could be built up which would add much to the effectiveness of the course. The teaching problem is to make the work of the course concrete and well-understood to beginners who have little other background than the memory of their own school days.

For those instructors in normal schools who desire to make their introductory course still more of an Introduction to Teaching than this text provides, an almost ideal combination would be to use this book in connection with another volume in this series, Almack and Lang's *Problems of the Teaching Profession*.

In the form here presented it is hoped that this volume may prove useful as an introductory textbook in Education in normal schools, teachers colleges, colleges, and universities, and also that it may be found helpful by teachers in service who desire to obtain a more comprehensive view of the general field of education than they now possess. Still more, it is hoped that the book may prove attractive to the general student and reader, as an attempt has been made in writing it to present the maximum amount of information as to education which the limits of a volume of this size would permit.

ELLWOOD P. CUBBERLEY

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INTRODUCTION TO THE STUDY OF EDUCATION

1 - 22

CHAPTER I

OUR EDUCATIONAL EVOLUTION

Religious origin of our schools. Free State schools, as we know them to-day, are a relatively recent creation. As with the older European countries from which our early settlers came, schools with us arose everywhere as children of the Church. From instruments of religion they have been gradually changed into institutions to promote the welfare of the State.

Practically all the early settlers of America came from among those people and from those lands which had embraced some form of the Protestant faith, and most of them came to America to enjoy a religious freedom not possible in the countries from which they came. Here they settled in the wilderness and began life anew. Among the European ideas they brought with them were the importance of religion, and, in all except the Southern Colonies, of general education as well.

Of all those who came to America during the early period, the English Puritans who settled New England contributed most that was important for our future educational development. The education of the young for membership in the Church, and the perpetuation of a learned ministry for the churches, almost from the first claimed their serious attention. In the beginning home instruction was tried, but,

this failing, they next resorted to laws (1642) which required all children to be taught to read and to know the laws and the principles of religion. A few years later (1647) they required that teachers be provided generally, and that Latin grammar schools be established in the larger towns to prepare boys for the college (Harvard), this having been founded even earlier (1636). These laws, at the time new in the English-speaking world, became the corner-stones upon which our later State school systems have been built.

Into the Middle Colonies, best represented by New Jersey and Pennsylvania, came a mixture of peoples — English, Dutch, Swedish, German, and Scotch-Irish — all Protestants in faith, but representing a number of different churches and nationalities. No church here was in the majority, so each denomination accordingly developed its own schools, and about as it wished and could afford. The clergymen usually were the teachers in the church schools thus established, and the instruction was in the language of the different peoples. Private pay schools also were established in the larger towns. The result in the Middle Colonies came to be a dependence upon church and private effort for educational advantages, and the schools thus established were largely for those who could afford to pay for the instruction given. Under the primitive conditions of the time, education, aside from such religious instruction as the churches gave, often declined to the vanishing point.

In the Southern Colonies, where the settlers were largely of English stock and had come to America for gain rather than for religious freedom, no such urge toward either education or religion existed as among the Northern peoples. In consequence English practices were followed, and these were the tutor in the home or education in small select private schools for the wealthier classes, while the poorer classes were left with only such advantages as apprentice-

ship training and the few pauper schools of the time might provide. In the latter, only reading, writing, and religion were taught.

Type attitudes by 1750. By the middle of the eighteenth century we thus find three type attitudes toward education

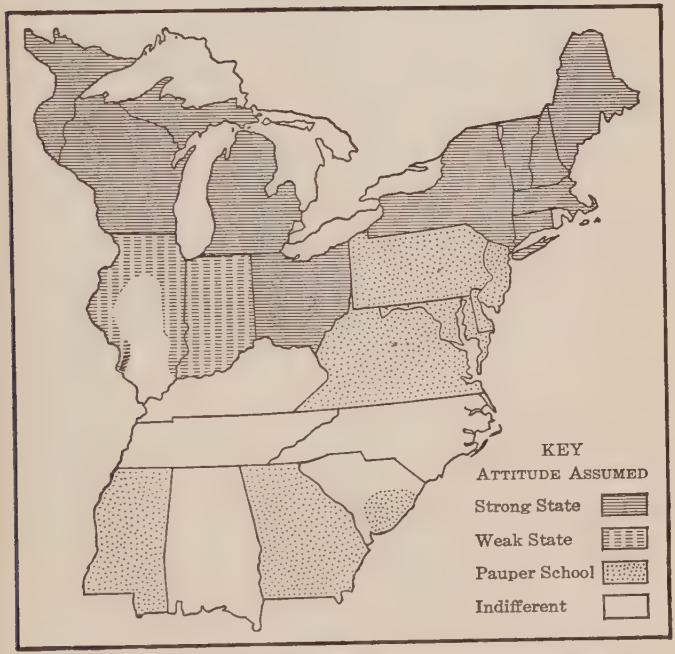

Fig. 1. Early Attitudes Assumed toward Public Education by the Original States, and the States Later Carved from the Ceded National Domain

transplanted from the home lands and established on American soil. These three type attitudes are important, as they not only shaped our future educational development but gave us some of our hardest educational battles as well.

The first was the strong New England Puritan concep-

tion of a religious State, supporting a system of common schools for the children of all the people, and higher Latin schools and a college for the preparation of a learned ministry. These schools the State enforced by law and compelled taxation to support. This type dominated New England, Rhode Island excepted, and deeply influenced the educational development of all States to the westward to which New England people subsequently migrated. Out of this attitude, by the later separation of Church and State, our modern State systems of tax-supported public instruction have been evolved.

The second type attitude was the parochial-school conception of the Middle Colonies, best represented by Protestant New Jersey and Pennsylvania and Catholic Maryland. It stood for church control of all educational effort, resented State interference, in time came to be a serious obstacle in the way of the development of State education, and finally had to be overcome in the legislature and at the polls.

The third type, into which the second type tended to merge, conceived of public education, aside from collegiate education, as intended chiefly for orphans and children of the poor, and as a charity which the State was under little or no obligation even to assist in supporting. Children of the upper and middle classes attended private or church schools, paying for the education they received. This was a truly English conception, based on the general English belief that education was no business of the State. It was found in both the Southern and the Middle Colonies, and one of the big battles in our later educational history was to eliminate this pauper-school idea from our American life.

These three types of attitudes toward public education became fixed American types during the colonial period, and profoundly influenced subsequent American educational development.

By 1750, too, a change in the old attitude toward religion was clearly evident in the American colonies. New settlements, frontier conditions, hard work, the rising commerce, lack of contact with Europe where the hatreds of the Reformation period still lingered, and the gradual rise of a civil conception of government — all these helped to weaken the hold on the people of the old religious doctrines. By 1750 the change in thinking in America had become quite marked. The old religious fervor and intolerance were dying out, secular books had begun to dispute the earlier monopoly of the Bible, greater compulsion was necessary to secure attendance at the churches, and new questions of taxation and public policy were beginning to challenge the thinking of the colonists. The growing exasperation with the mother-country for her foolish colonial policy aided in giving the people a confidence in their ability to care for themselves. There were indications, also, that we would soon evolve some distinctively American forms of education the better to meet our own needs.

Effect of the War for Independence. The outbreak of the War for Independence checked all independent development in the matter of education. For something like half a century little was done, and much was lost. The effect of the War on all types of schools was disastrous. Most of the rural and parochial schools closed, and many of the private and charity schools in the towns and cities also were forced to discontinue. In New York City, then the second largest city in the country, practically all schools closed with the British occupancy and remained closed until after the end of the War. Many of the Latin grammar schools closed from a lack of pupils to teach, while the nine colleges of the time were almost deserted. The War engrossed the energies and the resources of the people, and schools, never very securely placed in the affections of the people, outside of

New England, were allowed to fall into decay or entirely disappear.

The close of the War found the country both impoverished and exhausted. All the colonies had made heavy sacrifices; many had been overrun by hostile armies; and the debt of the Union and the States was so great that many thought it could never be paid. Commerce was dead; petty insurrections against the new government began to appear; the new States were quarreling with one another; England remained antagonistic; and foreign complications soon arose. Ways and means of strengthening the new government and holding the Union together, rather than plans that could bear fruit only in the future, occupied the attention of the leaders of the time. It was indeed a critical period in our history, and that little or no attention was anywhere given to education was but natural.

There were many conditions in our national life, too, that caused lack of interest in education among our people to continue for more than a generation after the War for Independence was over and the new Federal Government had been established. The simple agricultural life of the time, the homogeneous character of the people, the absence of cities, the isolation and independence of the villages, the lack of manhood suffrage in a number of the States, the want of any economic demand for education, and the fact that no important political question calling for settlement at the polls had as yet arisen — these were some of the reasons why schools and learning seemed to most men as something of but minor importance. There was little need, either, for any book-learning among the masses of the people to enable them to transact the ordinary business of life. Few letters were written, seldom did one need to sign his name, newspapers in the modern sense did not exist, and the ability to read and write and cipher clearly served to dis-

tinguish the educated man from the uneducated one. To be ignorant of these simple arts was in no way anything to be ashamed of.

It was not until after we had settled our political and commercial future by the War of 1812; a national consciousness laid on a democratic basis had been built up in the years immediately following; the rise of manufacturing and trade and industry had begun; and the Nation at large possessed the energy, the money, and interest for doing so, that we turned our attention to the creation of a democratic system of education for our people. So far as any real interest in education existed before about 1820 it was in the Latin grammar schools, the new academies, and the rising colleges of the time. After 1800 a new type of secondary school — the Academy — began to be established in numbers, and by 1825 seven States — Virginia, North Carolina, South Carolina, Georgia, Ohio, Indiana, and Michigan — had laid the foundations of future State universities.

Awakening of an educational consciousness. Up to about the time of the beginnings of our national existence, education, like baptism, marriage, the administration of the sacrament, and the burial of the dead, had been considered as primarily a function of the Church. The first half-century of our national life may be regarded as a period of transition from the church-control idea of education over to the idea of education under the control of and supported by the State. It required time to make the change in thinking. After about 1820 a number of new forces — philanthropic, political, social, and economic — combined to produce conditions which made State rather than church control of education seem both desirable and possible. Based, as our new government had been, on the two new principles of the political equality of all men and the freedom of all in matters of religion, education began to seem something

that was desirable for all for political reasons. The gradual development of a national consciousness, national pride, and national resources in the shape of taxable property also helped to make State rather than Church schools seem desirable to a constantly increasing number of our citizens.

The first important movement, looking to the provision of some educational advantages for poor children not cared for by any religious group, was the organization, in a number of our cities, of what were known as 'City School Societies.' These were formed on the basis of a subscription list, teachers were employed, and schools were opened for the children of the poor. New York City, between 1805 and 1842, was especially prominent in this movement, and excellent work was done by school societies in many other Eastern cities. Benevolent individuals also opened or sponsored schools, free places in established pay schools were provided, and Sunday-School instruction was tried.

In 1806 a Monitorial School was opened in New York City. This new plan of instruction, introduced from England, seemed so wonderful in its organization, so cheap to maintain, could care for so many pupils, and was so effective in teaching reading and the fundamentals of religion that it was hailed as a marvelous discovery. Soon monitorial schools were founded in most of the Eastern cities, and for the next twenty-five years, by which time their popularity had passed away, these schools rendered an important service in awakening an interest in the education of the masses. They made the school of the people common and much talked of, and they awakened thought and provoked discussion on the question of public education.

The growth of cities and the rise of manufacturing also did much to arouse an interest in education at public expense. By 1820 many little villages were springing up,

villages were changing into cities, water power was being harnessed, and factories were commencing their work. The introduction of the steamboat (1809), the steam railroad (1826), and the digging of many canals (Erie Canal, 1825) opened-up the possibility of doing business on a scale before undreamed of. The invention of the steam printing-press, too, had made cheap modern newspapers practicable, and the work of the press in moulding public opinion was beginning. The inventive genius of our people was now called into play, and Yankee ingenuity soon manifested itself in every direction. The great work of steam now began, and between 1820 and 1850 the industrial methods of America were revolutionized. The rise of the factory system, the rapid development of cities, the larger scale of business undertakings, the increase of new social and child-welfare problems as country people moved to the cities to live and work, and new political questions which grew out of the extension of manhood suffrage — all these combined to create a demand for general education to prepare individuals to live intelligently in the new political and industrial world now so rapidly developing.

The election of Andrew Jackson as President, in 1828, was a clear revolution of the masses against the trained aristocratic type of government that had preceded, and was an event of far-reaching importance in our national life. After this it became evident, to a rapidly increasing number of our people, that general education of the people had become a fundamental necessity for our country. Still more, it also became apparent that the general education of all our people in the fundamentals of knowledge and civic virtue must now assume an importance in the affairs of State that the careful education of a few had once held in the life of the Church.

The great battles for free schools. At first various sub-

stitutes for State support and control of education were tried. More School Societies were chartered. Religious schools were subsidized. Numerous lotteries to aid schools were authorized by law. Grants of public land for the endowment of schools were made. State support of pauper schools only was tried. Freedom of taxation to schools and educational societies was granted. Finally, all these makeshifts failing, they were gradually discarded and the battle for free, tax-supported, non-sectarian, and publicly controlled and directed schools, to serve the needs of society and the State, was on in every Northern State.

The second quarter of the nineteenth century may be said to have witnessed this battle. In 1825 — always excepting certain portions of New England where the free-school idea had become thoroughly established — free, tax-supported, non-sectarian, and publicly controlled schools were the distant hope of the statesman and the reformer; in 1850 they were becoming an actuality in every Northern State. The twenty-five years intervening marked a period of public agitation and educational propaganda; of many hard legislative fights; of a struggle to secure the desired legislation, and then to hold what had been secured; of numerous bitter contests with church and private-school interests, which felt that their "vested rights" were being taken away from them; and at times of referenda in which the people were asked to advise their legislatures as to what to do in the matter. It was a time of acrimonious controversy, and much bitterness of feeling was engendered. The advocates of free schools were regarded as fanatics, dangerous to the State; the opponents of free schools were considered by them as old-time conservatives, and as selfish, short-sighted members of society.

This battle was waged for different objectives in different States, but it centered about seven main strategic points.

These were:

1. The general taxation of all property to support free schools.
2. The elimination of the charity or pauper-school conception from our land.
3. The abolition of small tuition or other charges, and the making of the schools absolutely free.
4. The elimination of all sectarian instruction and control.
5. The establishment of State supervisory control.
6. The extension of the "common school" upward to include the high school.
7. The creation of the State university to crown the educational system.

It was the work of years to convince the masses of the people that the scheme of State schools was not only practicable, but also the best and most economical means for giving to their children the benefits of an education; to convince citizens of property that taxation for education was in the interests of both public and private welfare; to convince legislators that it was safe to vote for free-school bills; and to overcome the opposition due to apathy, religious jealousies, and private interests. In time, though, the desirability of common, free, tax-supported, non-sectarian, State-controlled schools became evident to a majority of the citizens of the different American States, and as it did the American State School, free and equally open to all, the birthright of every American boy and girl, was finally evolved and took its place as the most important institution in our national life working for the perpetuation of our free democratic ideals and the advancement of the public welfare.

The leaders in the struggle. Thousands of prominent people in all walks of life engaged in the struggle. Many ministers of the gospel rendered valuable aid, and a number of our early State school superintendents were clergymen.

Many college professors served the cause. Caleb Mills, of Indiana, and Calvin E. Stone, of Ohio, two celebrated leaders in their States, were both college professors. Many governors helped, and among these DeWitt Clinton of New York gave most valuable assistance. Candidates for office were forced to declare themselves. Abraham Lincoln, when a candidate for the lower house in the Illinois Legislature, in 1832, issued an address to his constituency in which he came out squarely for public schools. Many newspapers and labor organizations helped, and hundreds of propaganda societies were formed to forward the cause.

Of the many who were prominent a few stand out as the great leaders in the struggle. Horace Mann (1796–1859) in Massachusetts, and Henry Barnard (1811–1900) in Connecticut, stand out most prominently in "the awakening." Mann was the great organizer of campaigns and defender of the faith; Barnard the scholar and originator of new ideas. Almost contemporaneous with these men were leaders in other States who helped fight through the battles of State establishment and State organization and control. Gideon Hawley in New York, Thaddeus Stevens in Pennsylvania, Samuel Lewis and Samuel Galloway in Ohio, Ninian W. Edwards in Illinois, John D. Pierce and Isaac E. Crary in Michigan, Robert J. Breckinridge in Kentucky, Calvin H. Wiley in North Carolina, and John Swett in California are names that are known to students of the history of education everywhere. It is not without its significance, as revealing the enduring influence of the religious conception as to the importance of education, that practically all these men were either of New England Puritan stock or of Scotch-Irish Presbyterian ancestry.

By the close of the second quarter of the nineteenth century, certainly by 1860, we find the American public school system fully established, in principle at least, in all our

Northern States. Much yet remained to be done to carry into full effect what had been established in principle, but everywhere democracy had won its fight, and the American public school — supported by general taxation, freed from the pauper-school taint, free and equally open to all, under the direction of representatives of the people, independent of sectarian control, and complete from the primary school through the high school, and in every Western State through the university as well — may be considered as established permanently in American public policy. The establishment of the free public high school and the State university represent the crowning achievements of those who struggled to found a State-supported educational system fitted to the needs of great democratic States. After the War between the States, the free-school idea was adopted by all the Southern States where it had not been developed earlier, while the Western States have had the idea brought to them by their early settlers and in consequence established from the first in their constitutions and laws.

Creation of the normal school. Once the public school was created, the idea of training teachers for it naturally arose. The first teacher-training school in America was established privately, in 1823, by the Reverend Samuel R. Hall, who opened a tuition school for the training of teachers at Concord, Vermont. He offered a three-year course which reviewed the common-school branches, and included mathematics, some book science, logic, astronomy, evidences of Christianity, and moral and intellectual philosophy. In the third term of the third year he introduced a new study called the "Art of Teaching," basing it on his own experience as a teacher. To make clearer his ideas he wrote out a series of *Lectures on Schoolkeeping*. In 1829 these were published, and formed the first book in English on the subject of teaching to be published in this country.

The teacher-training idea took root but slowly, but in 1839 Horace Mann secured the establishment of the first State normal school in the United States. This was opened at Lexington, Massachusetts, July 3, 1839, with one in-

Fig. 2. The First State Normal School Building in America
At Bridgewater, Massachusetts. Dedicated by Horace Mann, in 1846.

structor and three students. By 1860 twelve State normal schools had been established, in nine States, and six private schools had also been created for the same purpose. By 1865 the number of State normal schools had been increased to twenty, and after about 1870 both their number and size increased very rapidly. To-day the normal school, or teachers college, is accepted as a necessary part of the educational system of a State.

New educational ideas from abroad. Since our early educational beginnings were largely English in origin, it was but natural that they should be clear copies of what had been worked out in the mother country. Even our first distinctively American creation — the high school, first established in Boston in 1821 — was an adaptation of English antecedents. Even after our separation from England we continued to follow English practices, and it was not until about 1840 to 1845 that the better work which had been

done elsewhere began to influence us at all. After 1848 the new ideas of the German-Swiss Pestalozzi (1746–1827) were given to the teachers of Massachusetts, and after 1860 their spread over the country was rapid.

Rejecting the dull memory work of the earlier religious school, and basing his instruction on development from within, sense-perception, reasoning, individual judgment, and oral instruction, Pestalozzi laid the foundations of the modern, secular, elementary school. He also worked out much new subject-matter for it — science instruction, oral language work, geography, mental arithmetic — and began the teaching of drawing and music. Still more, he and his teachers worked out a technique of instruction, vastly different from anything the older religious elementary school had known. He thus stands as a commanding figure in the history of elementary education, and as the most important of those who helped to create the modern secular elementary school. All this new teaching material we in time inherited, and it was the introduction of this which gave such vitality to the new normal schools, after about 1865. The new conception of the child as a developing personality, demanding subject-matter and method suited to his stage of development, and the new conception of teaching as that of directing a child's education, instead of hearing recitations and "keeping school," now replaced the earlier accumulation-of-knowledge idea of the school. To teach, by the new Pestalozzian procedure, now seemed to many the most wonderful thing in the world.

In 1855 the first kindergarten in America was established in a German-speaking community in Wisconsin, and in 1860 an English-speaking kindergarten was opened in Boston. In 1873 the first public school kindergarten in the United States was opened in St. Louis. This was a new idea for which we are indebted to a German by the name of

Froebel (1782–1852), and which was based on the fundamental educational concept that the pupil's self-activity should be utilized and made to contribute to educational, moral, and social ends. A natural extension of this idea to the upper grades, after about 1880, brought us the manual-training activities and the manual-arts high school, and for these additions we are chiefly indebted to the Swedes, Finns, and Russians. To a German by the name of Herbart (1776–1841) we are chiefly indebted for a better psychology of the educational process than Pestalozzi had known, a new statement of the aim and method in education, and new subject-matter — history, literature, social studies — of much importance for the elementary school. To an American, Francis W. Parker (1837–1902), we are indebted for having brought to us the best of the new German ideas as to the teaching of geography and science.

Assimilation of these contributions. We have since changed the character of all these new contributions, working them over and adapting them the better to fit the needs of our American children. Excepting instruction in agriculture, though, which came in recently in response to an economic demand and as an outgrowth of our nature study, and the recently developed instruction in health work, the elementary-school course of study by 1900 contained all the elements of the elementary-school course of to-day. The changes and additions and the variations in emphasis and methods which have taken place since we began are well shown in the chart on page 17. The beginning of these changes goes back to the work of Pestalozzi, though his contributions and those of Herbart, Froebel, and their followers are so interwoven in the educational practice of to-day that it is, in most cases, impossible to trace them or to separate them out one from the other. We have assimilated them rather than merely adopted them, and our elementary-

1775	1825	1850	1875	1900
READING	READING *	READING	READING	READING *
	Declamation	DECLAMATION	*Literary Selections*	LITERATURE *
Spelling	SPELLING *	SPELLING	SPELLING	*Spelling*
Writing	*Writing*	WRITING	PENMANSHIP *	*Writing* *
Catechism	*Good Behavior*	Manners	Conduct	.....
BIBLE	*Manners & Morals*	Conduct		
Arithmetic	ARITHMETIC *	MENTAL ARITH.*	PRIMARY ARITH.	ARITHMETIC
		CIPHERING	ADVANCED ARITH.	
	Bookkeeping	Bookkeeping	.....	.....
	GRAMMAR	Elem. Language	*Oral Language* *	ORAL LANGUAGE
		GRAMMAR	GRAMMAR	*Grammar*
	Geography	*Geography*	Home Geography *	*Home Geography*
			TEXT GEOGRAPHY	TEXT GEOGRAPHY *
	History U.S.		U.S. HISTORY	*History Stories* *
			Constitution	TEXT HISTORY *
		Object Lessons	Object Lessons *	*Nature Study* *
			Elementary Science *	Elem. Science
			Drawing *	*Drawing* *
			Music *	*Music* *
			Physical Exercises	Play
				Physical Training *
	Sewing and Knitting	.....	.....	Sewing
				Cooking
				Manual Training

CAPITALS = Most important subjects. *Italics* = Subjects of medium importance. Roman = Least important subjects.
* = New methods of teaching now employed.

FIG. 3. THE EVOLUTION OF OUR ELEMENTARY-SCHOOL CURRICULUM, AND OF METHODS OF TEACHING

school instruction of to-day, despite these important additions since 1860 remains, as before, a sturdy native development.

Since about 1900 new conceptions as to the nature and purpose of the educational process have changed almost entirely the character of our earlier school work. The center of gravity has been shifted from subject-matter to the child to be taught, and the school, in consequence, has largely changed from a place where children prepare for life to a place where children live life, and thus prepare for civic and social efficiency in the national life of tomorrow. The school has thus become a new institution. The studies which have come to characterize the modern elementary school may now be classified under the headings:

Drill subjects.	*Content subjects.*	*Expression subjects.*
Reading	Geography	Kindergarten work
Writing	History	Music
Spelling	Literature	Drawing
Language	Civic Studies	Manual Arts
Arithmetic	Manners and Conduct	Domestic Arts
	Nature Study	School Gardening
	Agriculture	Vocational Subjects
	Health Work	Plays and Games
		Auditorium Activities
		Civic Activities

The order of arrangement is not only almost the order of the historical introduction of the different subjects into the elementary school, but the three groups also represent the three great periods of our elementary-school development. The drill subjects characterized the earlier school; the content subjects, excepting the last two, the period of development between 1860 and 1890; and the expression subjects the modern elementary-school development.

The present conviction of our people. Slowly but certainly public education has been established as a great

State, one might almost say, a great National interest of the American people. They have conceived of education as being essential to the welfare of the State, and have established State systems of education to enforce the idea. The principle that the wealth of the State must educate the children of the State has become firmly fixed. The schools have been made free and equally open to all; education has been changed from a charity to a birthright; and a thoroughly democratic educational ladder has everywhere been provided. The corollary to free education — the compulsion to attend — is now beginning to be enforced. The school term has been lengthened, the instruction greatly enriched, new types of schools and classes provided, and new extensions of educational opportunity have been begun.

As a result of our long evolution we have finally developed a thoroughly native series of American State school systems, bound together by one common purpose and working for the same national ends. In consequence it may now be regarded as the settled conviction of our American people that the provision of a liberal system of free non-sectarian public schools, in which equal opportunity is provided for all, even though many different types of schools are needed, is not only an inescapable obligation of our States to their future citizens, but also that nothing that the State does for its people contributes so much to the moral uplift, to a higher civic virtue, to health and happiness, and to increased economic returns to the State as does a generous system of free public schools.

The scope of this chapter. We have now traced, in the briefest possible manner, the larger outlines of the history of educational development in the United States. In the chapters which follow we shall frequently add other historical paragraphs, that will explain some phase of our development more in detail. It is a very interesting subject, and a

detailed study of our educational history, as given in a course in the *History of Education in the United States*, will reveal to the student a fascinating story. It will also reveal how fully the problems and practices of present-day education are an outgrowth of a long historical development. Still more, the course will interpret to the student the evolution of much of the best in our American life.

If one has time, and cares to carry historical studies further, either in classes or alone, there is no more interesting historical study than the general *History of Education*. It is not so immediately practical as many other courses, but it gives a vision and a perspective that few other studies can give. The story is the story of the rise and progress and the ups and downs of the human race, traced as it relates to education. It is in a sense the history of our Western Civilization, from the days of little Greece to the present, studied in one of its highest forms. From such a study one learns how deeply the roots of our civilization go back into the past, and that the state of education to-day in our Western World is the product of and a natural evolution out of what has gone before — a development, a culmination, a flowering-out of forces and impulses that go far back in history for their origin.

QUESTIONS FOR CLASS DISCUSSION

1. Explain how the Puritan contribution became the corner-stone of our modern State school systems.
2. Explain why the parochial system of the Middle Colonies was as natural for them as the State system for Massachusetts.
3. Show how the rising individualism of later colonial times tended to weaken the hold of religious education.
4. Show how a change from a religious to a political motive for schools was a natural accompaniment to the theories of the Declaration of Independence and the establishment of our new type of constitutional government.
5. Explain why we were so slow in developing an educational consciousness.
6. Explain why the development of a national consciousness was necessary before an educational consciousness could be awakened.

7. Explain how the School Societies and the Monitorial Schools helped to pave the way for tax-supported schools.
8. Show how the development of cities and the extension of the suffrage called for new types of educational opportunity.
9. State the change in the character of instruction from that of the church schools to that of Pestalozzi.
10. Does the obligation to educate impose any greater exercise of State authority than the obligation to protect the public health?
11. While schools have been established by majority action, is it not true that this, and further development, have come as the result of the work of a small thinking minority? Illustrate.
12. Illustrate the difference between an acceptance in principle and an acceptance in reality.

EXERCISES AND PROBLEMS

1. Cubberley, on pages 120–22 of *Public Education in the United States*, gives the arguments advanced for and against free schools during the great early battle for taxation for education. Look these up, and estimate the importance of each as we view the matter to-day.
2. Just what is furnished free, with tuition, by the schools of your State to-day?
3. Look up and report on the following topics, using Monroe's *Cyclopedia of Education* as a source:
   a. Pestalozzi, and his work.
   b. The Monitorial System of Instruction.
   c. Colonial Period in American Education.
   d. Henry Barnard and his work.
   e. Horace Mann and his work.

COLLATERAL READING

Cubberley, E. P. *Public Education in the United States.* (517 pp., 85 illustrations, 28 portraits.)

An introductory textbook, dealing with the larger problems of present-day education in the light of their historical development. A study and interpretation of American educational history.

Cubberley, E. P. *A Brief History of Education.* (462 pp., 101 illustrations, 8 pictures.)

A history of the practice and progress of education, treated as a phase of the history of the development of our Western Civilization. An abridgment of the author's larger (849 pp.) *History of Education.*

Graves, F. P. *A Student's History of Education.* (445 pp., illustrated.)

A brief general history of education, covering both European and American educational development.

Keith, J. A. H., and Bagley, W. C. *The Nation and the Schools,* chap. II.

Monroe's *Cyclopedia of Education.* 5 vols.

A good general reference for use with all chapters of this book. Contains many short historical articles.

CHAPTER II

THE EDUCATIONAL PROBLEM OF THE UNITED STATES

In tracing the evolution of the American public school from its beginnings, down through the educational reorganization that took place between 1850 or 1860 and 1890 or 1900, as was done in the preceding chapter, we showed how the native American school was modified and expanded as a result of new ideas that came to us from abroad. In this chapter we shall point out how the school has experienced other changes in direction by reason of the coming of new peoples, as well as new ideas, and by the great industrial changes of the past seventy-five years. Combined, these two forces have profoundly modified our early educational problem.

Our original stock, and the change. While we early received some migrations from other than English lands, by the time of the War for Independence we had so assimilated them that we had become a thoroughly English-type colony, speaking the English language, following English customs, and copying English practices in the schools we maintained. The first Federal Census, of 1790, shows us to have been preponderantly English in stock. Only among the Germans of Pennsylvania was there any large body of people who spoke another language and followed other ways. New England was even more English than England itself.

Up to 1820 the annual immigration into our country was small, and largely English in character. Not until 1842, when the great stream of Germans and Irish had clearly begun, did the number coming in any one year reach the hundred thousand mark. Excepting two years during our

Civil War, and up to the World War, our immigration, since 1845, has never been less. The numbers steadily increased with the years, and between 1903 and 1914 the numbers coming ranged from three quarters of a million to a million and a quarter a year.

Up to 1825, at least, those coming were very largely English, Scotch, and Protestant Irish, and these fitted in very well with our native stock and caused us no concern. Between 1820 and 1840 both the German and the Irish immigration increased rapidly, and Irish Catholics from southern Ireland began to replace the northern Protestant Irish of the earlier migration. After the potato famine of 1846–48 the Irish came in large numbers, and in all over four millions of Irish have come to us since we first began, in 1820, to keep count of our immigrants. About this same time large numbers of Germans also began to arrive, and after 1848 they increased steadily for the next three decades. In all, about five and a quarter millions of the best and most liberty-loving of the German people have come and settled among us. During the middle years of the nineteenth century about three and a half millions of English also came, followed by about two millions of people of the Scandinavian races.

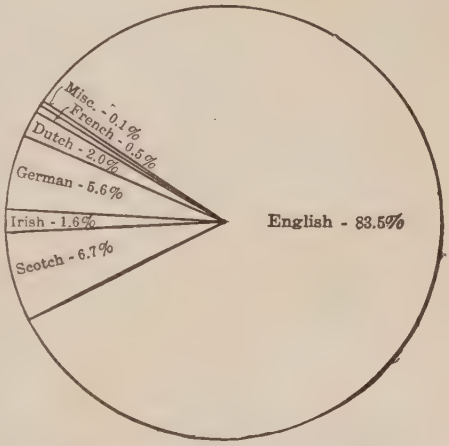

FIG. 4. NATIONALITY OF THE WHITE POPULATION, AS SHOWN BY THE FAMILY NAMES IN THE CENSUS OF 1790

After about 1882 the character of our immigration changed in a very remarkable manner. Immigration from the North and West of Europe declined abruptly, and in its place immigration from the South and East of Europe set up in a constantly increasing stream. Italians, Greeks, Austro-Hungarians, Balkan-States peoples, Spaniards, Turks, Russian and Austrian Jews, Syrians, and Armenians were the chief nationalities now admitted. French Canadians also poured over the border into the mill towns of New England. By 1914 nearly half the foreign-born in the United States were of this new migration.

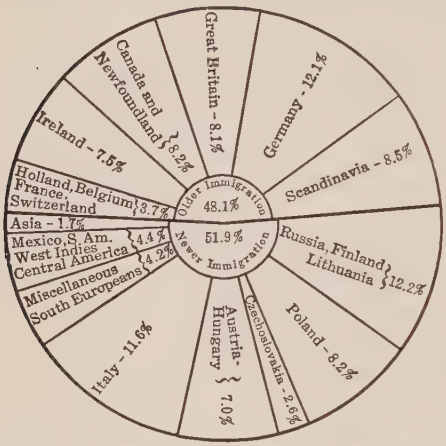

FIG. 5. FOREIGN-BORN IN THE UNITED STATES
(As shown by the Census of 1920)

From 1820 to 1914, a total of 32,102,671 immigrants came to live among us. No such great movement of peoples was ever known before in history. Compared with this vast influx of peoples to a new world, the migrations of the Germanic tribes — Angles, Saxons, Jutes, Goths, Vandals, Visigoths, Ostrogoths, Sueves, Danes, Burgundians, Huns — into the old Roman Empire, in the fourth and fifth centuries, pale into insignificance. As a result, we are the greatest cosmopolitan mixture the world has ever known.

Results of this movement. Of those who came to us in this great migration, more than one third could neither read nor write, and the influx of such large numbers of people,

poor and uneducated, who would ultimately become citizens and voters, early awakened a solicitude for our political future and aided materially in the establishment of public education and the development of State control. The later migration has awakened even more concern. Settling largely in the cities of the North, the agricultural regions of the Middle and Far West, and the mining districts of the mountainous States, they have created serious problems in housing and living, moral and sanitary conditions, law and order, and honest and decent government, while popular education everywhere has been made more difficult by their presence. After about 1890 these new peoples came so fast that we were unable to assimilate them, our so-called "melting-pot" had more than it could handle, and our national life suffered seriously in consequence.

The World War brought to us a consciousness, for the first time in any effective manner, of the grave results upon the character of our national life brought about by unrestricted immigration. We saw clearly, as we entered the conflict, that we had been permitting to come to our shores large numbers of people who came primarily for gain, and who, even though they took out citizenship papers, cared little for us, our democratic institutions, or our government. After the army draft we found that many of these, too, possessed such a low degree of intelligence that they were a serious handicap to the body politic. It became apparent that, while thinking we had been merely providing a home for the poor and oppressed of all lands we had reposed in a false security, and we were in reality facing a vast social and racial problem involving our national safety and unity and the preservation of our democratic institutions and ideals. When the War ended we saw that our only salvation lay in greatly restricting the intake, and that this must be done at once and in a thoroughgoing manner if we were to

escape the worst deluge in our history. After some experimenting, the Johnson Immigration Law of 1924, restricting the intake to two per cent of those already here, for each nationality, and that based on the Federal Census of 1890, was passed by Congress.

The problem of education and assimilation. Our problem now is to hold to the restrictions imposed until our "melting-pot" can do its work, and then in the future to choose, in some thoroughly scientific manner, those whom we care to have come and make their homes with us. That our problem is not a simple one may be seen from the fact that, by the 1920 Census, there were still almost five millions of illiterate persons, ten years of age or over, in our total population; that in many of our cities an illiteracy of 5 to 8 per cent was common, with up to 15 per cent found in some of our northern manufacturing cities; and that an illiteracy of 25 to 35 per cent among the foreign-born was not unusual. Of our nearly fourteen millions of foreign-born whites, but 47.2 per cent had become naturalized, and 8.9 per cent additional had taken out their first citizenship papers. Twelve and one half millions of these were over twenty-one years of age, and among these, despite the work of the army-camp schools, there were still a million and three quarters of illiterates.

To assimilate these peoples into our national life and citizenship is our problem. We must do this and we must, if possible, give them the impress of our peculiar institutions and ideals. National safety and national welfare alike demand that we not only teach these peoples to use the English language as our common tongue, but that they be educated also in the principles and ideals of our form of government. Even under the best of conditions this will require time, and it calls for a constructive national program if effective work is to be done. Social and political institu-

tions of value are the product of a long evolution, and they are safe only so long as they are in the keeping of those who have created them or have come to appreciate them. Our religious, political, and social ideals must be preserved from replacement by less noble ideals if our national character is not to be weakened.

The difficulties we face. When we face such a problem of nation building we seem, at first glance, to lack most of the necessary tools with which to work. Compared with a highly organized and centralized nation, such as Germany, France, Italy, or Japan, we seem feeble in our ability to organize and push forward a constructive program for national development. Many of the methods which they have used so effectively are entirely lacking with us. There the State is highly organized; the people homogeneous and like-minded; the ruling class is well educated, and selected by careful educational and service tests; national policies are well thought out and promulgated; the schools are a part of the national organization, effectively planned for the advancement of the national interests; the teachers have been carefully trained in State institutions, and then organized into a form of national army for national ends; the instruction in religion or national morality is directed toward definite civic ends; and national military service is used as an effective force for nationalizing all elements, and for training the people in obedience and in respect for law and order and authority.

We have almost none of these tools, and many of them we hope never to have. Our governments — city, county, State, and in part national — are but loosely organized. Political skill, rather than training and efficiency, usually offers the road to office. Our local government is good, bad, or indifferent, as our people desire it to be. Our governmental policies change frequently, and often give no evi-

dence of having been formed on the basis of expert advice. Through the initiative our people can propose almost any kind of ill-considered legislation. Though our State and National Governments have recently assumed many new functions, in the interests of efficient service, each addition has been looked upon with suspicion by many who fear the coming of centralized, bureaucratic control. The thinking men and students of fundamental questions in any form of government are relatively few. In monarchical forms of government the student and the scholar are sought out and drafted for public service, but in a democracy they constitute a minority seldom chosen for office. Everywhere our public officials are of the people, and represent majority opinion.

Our people, too, are a great unwieldy mixture of diverse races and religions, some groups of which strongly oppose being assimilated. The private and the parochial school exist side by side with the public school, usually without any supervision or control, and efforts to compel such schools to be taught in the English language have so far largely failed. In but a few of our States have one fourth of our teachers had any adequate training for service, and in a number of States not one in ten has been so trained. The administration of our schools is largely in the hands of inexpert local school boards, animated by no real conception of the educational process or any constructive national policy. Religious instruction and a supervising priesthood we do not want in the schools, and a national religion with us is inconceivable. Neither do we want our boys taken for service in the army, or given much of the kind of national discipline which army life imposes. The collection and segregation of non-English speaking nationalities in our cities and sometimes in our rural districts, and the coming of so many male adults without wives or children, have also

been against us. Some of our city newspapers do as much harm as good, and our foreign-language press is often positively bad. The hyphenated citizen, and the priest bent on holding nationalities together, alike complicate our problem.

The tools we really have. Yet notwithstanding these many handicaps we are after all not without tools of real effectiveness. Our common English language, our common customs, our common law, our common political institutions, our common democratic life, our newspaper habit, our free social intercourse, our ease of communication, our tolerance of other peoples, and a general absence of any large foreign priesthood intent on holding peoples together for religious ends — all these have helped us in the assimilation of other races. The army draft of the World War, with the many army schools that were then established, was also of much temporary benefit.

All these helps, though, are minor and incidental, and not a part of any clearly formulated State or national plan. The one great constructive tool which we possess is our public school system, and upon it, and upon it almost alone, must we place dependence for our social and political salvation. The superintendents and principals of our public schools, the professors of education in our universities and teachers' colleges, and the thinking leaders otherwise engaged in educational work are to-day doing more to formulate a policy for the improvement and advancement of the public welfare of this Nation than any other single group. Upon the principals and teachers who carry out the constructive policies thus formulated really rests the burden of the future of our free democratic institutions and the welfare of our country. What progress we as a people make in national character, from generation to generation, is largely determined by how well the public school has seen national

needs and been guided by that largeness of national vision without which but little progress in national welfare is ever made.

It is in our public schools, then, that our people, adult as well as young, must be trained for literacy, given the common English speech, be brought to understand our social and political institutions and history, be filled with the spirit and ideals of our national life, be trained for responsible citizenship in a democracy such as ours, and gradually — possible only after generations — be welded into that American race which is to-day in the making. In our high schools and colleges the more promising must be trained for leadership and service, and given a vision of the position America ought to assume in world affairs. It was for this that our early educational leaders fought the battles to establish the American free school, and to-day we realize, as never before in our history, the enormous importance for our future of the contributions which they made.

Industrial changes since 1860. The problem of the immigrant and his assimilation, great as it is, is not the only change in our national life that has thrown important new burdens on our public schools. Since 1860, and largely since 1875, the whole character of our life has been altered by the shifting of this Nation from primarily an agricultural one to one essentially manufacturing in type. Awakening to the marvelous possibilities which our vast resources in iron, coal, timber, and mineral wealth gave us, and applying new technical knowledge which in 1860 we had scarcely begun to teach, Yankee ingenuity and energy and brains have since transformed America and pushed it to the front as the world's greatest manufacturing nation. As a result we of to-day live in a new world — a world of steam and steel and electricity and applied science. Since 1860 our cities have increased greatly in number and in the com-

plexity of their life. To-day approximately one half our people live in incorporated cities and towns, as against one sixth in 1860.

The great increase in city population and in the number engaged in manufacturing, all of whom are food and clothing consumers and not producers, coupled with a rapid increase in the standard of living and in the per capita food and clothing consumption of our people, have in turn caused a revolution in agricultural production and in life on the farm. New agricultural regions have been opened, new grains and fruits introduced, much new agricultural machinery perfected and put to use, new methods of marketing and preserving demonstrated, and a new agricultural education developed and firmly established in our schools. The prosperity of the farmer, too, and the ease and comfort of city life have alike led to the leasing of farms everywhere to tenants, while the owners move into town to enjoy urban advantages. As a result the old American-type farmer is in many places giving way to the foreign-born tenant farmer — Italians, Portuguese, Austro-Huns, Poles, Slavs, Bulgars, Serbs, Armenians, Mexicans — and it is probable that the movement is as yet only in its beginnings. Capable as agriculturalists, thrifty and economical, they pass successively from farm laborer to tenant, and from tenant to owner. The agricultural consequences of these changes in the character of our rural population may not be very important, but the educational and social consequences, as we shall point out in Chapter XX, are tremendous and far-reaching.

Effect of these changes on the home. As these changes in the nature of our national life have taken place, the character of our home life has altered greatly. Under the older village and rural-life conditions a large family was an asset, as every boy and girl could be of help from an early

age. In working about the house and the farm they received much valuable education and training. The new city life, though, has changed all this. A large family to-day in town is a serious liability rather than an asset, and the training received to-day in the home does not amount to much. In the home of early days girls used to be taught to sew, cook, bake, wash, iron, mend, and care for the house. On the farm the boy learned to plant, cultivate, and reap the crops, care for and feed the horses and stock, watch and learn to read the signs of the weather, mend wagons and harness, and make simple repairs to buildings and machinery. In the villages boys had "chores" to do, and saw many trades practiced which to-day no longer characterize village life.

The result of these changes of the past half to three quarters of a century are written large over our life of to-day. It is seen in the large number of small or childless families, and in the need everywhere for the instruction of children in things that their grandparents learned in the home and on the farm. Only among the foreign-born and in rural communities does one any longer find large families common. The native American, and the more thoughtful people generally shrink from the competition for their children, and tend to limit the size of their families to the few children they can now clothe and educate according to their own standard of living. This is one of the direct results of our unrestricted immigration policy in the past.

There are many compensating advantages, to be sure. Children of to-day grow up under more sanitary conditions, and are better cared for and are better educated. They work much less and have far more leisure, but they also acquire so much through the eye and the ear, and so little by actual doing, that a new educational problem has been created in consequence. Too often to-day our city homes

are only places where families eat and sleep, and not homes in the old sense at all. The family as a unit has gained much in comfort and pleasure as a result of the changes above enumerated; the losses have come largely to children and to society and to government.

As an accompaniment of these changes there has been a marked weakening of the old home restraints and educative influences that once exercised such a wholesome effect over the young. Communities were smaller then and much more homogeneous in character. Children formerly, much more than now, were taught obedience, reverence, courtesy, proper demeanor, honesty, fidelity, and virtue, and the Church and religion counted for much more in their lives than is the case to-day. The Church has lost much of its earlier influence, and millions of children are to-day growing up without Sunday-School training and largely ignorant of the Bible. The character of our Sunday observance has also greatly altered. The little homogeneous communities, with their limited outlook and local spirit, have been changed by the coming of a cosmopolitan population, a freer and easier life, and by semi-city conditions. The telephone, the automobile, the interurban trolley, the "movies," and the city newspaper have wrought great changes everywhere, and the new radio promises to work even greater transformations. Parents everywhere are less strict than they used to be. Children not only learn much more, go more, and see more than they used to do, but they also have far greater liberty than they used to have. The discipline of the young in obedience and good behavior and the other homely virtues is no longer fashionable. One finds this new home and life attitude expressed to-day in communities everywhere in their freer life, their sensational newspapers, their poor city government, and their general failure to enforce obedience to law.

Effect of these changes on the school. The effect of all these changes in our mode of living is written large on our national life. The home and life conditions of an earlier period are gone, never to return. We live to-day in a new, a rapidly changing, and a very complex and difficult world. Our only chance of meeting successfully these new life conditions lies in more and better education for our children than their parents had. The day when the ability to read and write and cipher served to distinguish the educated man from the ignorant one is far behind us. To-day a man who knows only these simple arts is an uneducated man, unfitted to cope with the life conditions of a modern world.

It is these vast and far-reaching social and industrial and home-life changes, which we have in this chapter sketched very briefly, that have been behind the many important changes in public education which have been made in the past fifty years, and which underlie the most pressing problems in American education to-day. As our civilization increases in complexity and difficulty, education must develop and broaden to retain its usefulness and effectiveness. It is impossible for the beginning student of to-day to understand the complexity of our public schools, the many new lines being developed and the new experiments under way, the reorganization in form and the rewriting of our courses of study, except in the light of the great social and industrial and home-life changes that have come to us largely in the past seventy-five years. To parents the changes now being made in public education often seem both incomprehensible and unnecessary.

As the new classes in the population have crowded into the schools of our cities we have been forced to reshape our instruction to meet their needs. As the applications of science have ushered in a new industrial civilization, and the old home and village arts have disappeared, we have been

compelled to add new activity and expression subjects to our courses of study. As the home has changed in character, and has more and more tended to turn the whole matter of the education and discipline of the young over to the public school to handle, we have been forced to recast our discipline and restate the purposes of our instruction. It is as true to-day as when our public schools first began that the nature of the Nation's needs must determine the character of the education we are to provide. As these needs change the school must also change.

The scope of this chapter. The new influences which we have outlined in this chapter, and their effect on the school, belong to the study known as *Educational Sociology*, though what we have outlined is broader than is contained in most courses in this subject. *Sociology* is the scientific study of society. In it one studies the ways in which group-life operates, and the consequences to man of its operation. *Educational Sociology* is an application of the principles derived from a study of the field of Sociology to the school, and to the problems of education as they relate to society. Educational History, Educational Psychology, Educational Hygiene, and Educational Sociology are often stated to be the underlying studies out of which one derives a philosophy of the educational process.

In our colleges and normal schools a number of other courses are given which cover parts of the problem here presented. In such courses as *Immigration Problems*, or *Races and Immigrants in America*, one studies the immigration aspect of the problem. In such courses as *Industrial History* one studies the nature and effects of the Industrial Revolution. In such courses as *Rural-Life Problems*, one studies the effect of the vast social and industrial changes on the important institutions of rural society — the home, the church, and the school. In such courses as *Poverty and*

Crime, Problems of Child Welfare, and *Educational Sociology* one studies the effects of these changes on the life of the child and the school.

QUESTIONS FOR CLASS DISCUSSION

1. Point out why the later immigration has been harder to assimilate than was the earlier.
2. Why is it much more dangerous when a foreign element settles in colonies than when it scatters?
3. Why is it that social and political institutions are safe only in the hands of the people who created them or have come to value them?
4. Point out the danger we faced, because of the South and East European immigration, of a slow replacement of our strong early American characteristics by traits less noble in character.
5. Has the flood of immigration reinforced our native stock, or merely replaced it?
6. If the latter, what is the real significance of the limitation of families by the more intelligent classes?
7. What must be the effect on rural social life and the rural school of the coming of the South and East European tenant farmer?
8. Show how the vast industrial changes have made more education for all a necessity.
9. Explain the great changes in home training and discipline which have taken place.
10. Would our schools be as important social institutions as they are today had the Industrial Revolution not taken place? Why?
11. Turn to the chart given on page 17 and point out the value, in the new order of society, of each group of school subjects listed there.
12. On the same chart, trace the dying-out of subjects and the rise of new subjects, and explain the changes in the light of the social and industrial changes which have taken place.

EXERCISES AND PROBLEMS

Read up on and be prepared for brief report on the first five topics.

1. A brief history of the development of agriculture in the United States. (Cubberley, *Rural Life*, part I.)
2. Nature and results of the Industrial Revolution. (Encyclopedia.)
3. Assimilation and amalgamation of racial stocks. (Commons, Ross.)
4. Problems of the modern family. (Ellwood, Smith.)
5. The economic, social, and political effects of immigration. (Ross.)
6. List the merchants of your community, and see what nationalities are represented.
7. Take the United States Census volume on *Population*, and find the

character of the population of your city, or county, or of any selected large city. What do the results mean in terms of our national life and needs?

8. Show, by concrete cases, how the vast commercial development in the United States has tended to limit individual opportunities, and how, in consequence, broader education for children has been made necessary.

COLLATERAL READING

The most useful books for the purposes of this chapter are indicated by an asterisk, and this plan will be followed in all subsequent chapters.

*Betts, Geo. H. *Social Principles of Education*, chap. v.

Bogart, E. L. *The Economic History of the United States*, part iv.

*Commons, John. *Races and Immigrants in America*, chaps. i–iv, ix.

Cubberley, E. P. *Changing Conceptions of Education.* (70 pp.)

Cubberley, E. P. *Rural Life and Education*, part i.

Dewey, John. *The School and Social Progress*, lecture i.

*Ellwood, C. A. *Sociology and Modern Social Problems*, chaps. viii, x, and xii.

*Fletcher, H. J. "Our Divided Country"; in *Atlantic Monthly*, vol. 117, pp. 223–33. (February, 1916.)

Gibbins, H. deB. *Economic and Industrial Progress of the Century.* (594 pp.)

*Ross, Edw. A. *The Old World in the New*, chaps. ix–xi.

Rossiter, Wm. S. "Who are Americans"; in *Atlantic Monthly*, vol. 126, pp. 270–80. (August, 1920.)

Smith, W. R. *Introduction to Educational Sociology*, chap. iv.

CHAPTER III

EDUCATION AS REPLACEMENT AND DEVELOPMENT

America's place in civilization. Ever since those far-distant days when the Benedictine monasteries and the Christian Church began the work of trying to save from complete destruction the civilization which Greece and Rome had developed, and which the German tribes that poured over the boundaries of the old Empire in the fourth and fifth centuries threatened to annihilate, we have been engaged in the building up and advancing of what we have come to call our Western Civilization. It has been a very long and a very costly proceeding. During the Middle Ages the work of reconstruction was very slow indeed, and at times the lamp of learning almost went out. Slowly and painfully, though, the fight was made and the battle won, and after about 1200 A. D. it became evident that civilization had not only been saved, but that it was thereafter to go forward at an increasing rate. The rise of the mediæval universities (after 1200), the rediscovery of the old Greek and Roman learning (fourteenth and fifteenth centuries), the discovery of the lost art of paper making (thirteenth century), the invention of printing (fifteenth century), the rise of geographical exploration (fifteenth century), and the beginning of scientific thinking (sixteenth and seventeenth centuries) — all these were important events that ushered in the Modern World. The latter half of the eighteenth century saw the rise of democratic and constitutional government, and the beginnings of the reign of iron and steam and factory methods, and of all the centuries since the turn of the tide, in the eleventh century, the nineteenth was the most won-

derful in the advances which were made in the arts of civilization. What the nineteenth began the twentieth has continued at a constantly increasing rate. What Europe saved and built up during the long centuries of struggle, America in time inherited, and what America inherited, it has advanced and perfected, and is still advancing and perfecting.

As a result of this long process we are not only the heirs of the ages, but we also owe an obligation to the future to continue the advance. Perhaps one of the grave dangers which we in America face, with our diverse population and limited tools with which to work, is that in the future we may witness a slow slackening of our social progress, that we may in time lose our lead in the advance of free peoples, and that the earlier religious, moral, social, political, and intellectual ideals of our people may be insidiously sapped by reason of the great mass of unassimilated immigrants we have allowed to come among us and become a part of us.

Progress essential to our welfare. Our problem, then, is double. We must retain, if we can, all the elements of our strength that we have inherited and developed in the past. These are not merely our ability to read and write and count and accomplish the material things, but rather our standards in culture, intelligence, morality, idealism, religion, political institutions, home-life, mental balance, physical stamina, and our firm belief in progress. To retain all these qualities we have come, increasingly year by year as the home and the church have declined in effectiveness or entirely given up the attempt, to depend more and more upon the school. Never before in our history were we as a people so dependent upon popular education for the retention of the best in our culture, morality, idealism, government, and home-life. We face a great task merely to hold our people, in the more fundamental traits of the best

of our national character, at the level to which they have attained. Reading and writing and mere literacy we can somewhat easily get; it is the deeper and more fundamental traits of our national character that cause us the most effort to instill and keep alive.

But beyond merely holding to the level to which we have attained, we ought, with each generation, to make some real advances. We owe this to civilization and to ourselves. Mere maintenance of our present level means a stationary place in a rapidly advancing world, and ultimate loss of position. No institution or people to-day can long expect to be regarded as a useful institution or a progressive Nation that does not continually build upon what has gone before. This is particularly true of a Nation that has been called upon to play so important a part in world history as has our own, especially in recent years. Never did opportunity knock more loudly at the doors of a Nation than it has at ours since 1914, and the place that we shall occupy in history will be determined largely by how well we are able to hold to the best to which we have attained, and continuously to advance in civilization with the Nation as a whole participating.

Education as replacement. Education, then, to-day must have a double function. It must make good the continual losses which a Nation suffers, and it must enable it to move forward continuously. In the first place, our yearly losses are large, and call for heavy replacements. We are a Nation of something over one hundred and fifteen million people to-day. Of this number approximately thirteen millions are children not yet of school age, twenty-five millions are children between the ages of five and fifteen, another ten millions are youths between the ages of sixteen and twenty, and eighteen millions are men and women who have passed fifty years of age and whose great usefulness

is past. Approximately twenty-five millions of young people are enrolled in some kind of school or college, public or private.

Our total losses by deaths each year are approximately two and a quarter millions. Of these, three quarters of a million are children who have not lived long enough to enter the public schools; approximately a quarter of a million are children of school age; and approximately a million and a quarter are men and women over twenty, who have presumably passed through our schools and received the training and knowledge which the schools can give, and large numbers of whom have also attained that very important maturity of judgment and experience that comes with age and service.

These losses are comparable, in the industrial world, to the parts discarded due to imperfections and not usable in the manufacture of the finished product, and to the wearing-out and breaking-down of pieces of valuable machinery which have been bought and paid for. These discarded parts and worn-out machines have to be replaced with new parts and pieces of machinery of equivalent type, merely to maintain output and keep the factory running on an equal scale of efficiency. Every well-managed business counts these replacements as important items in the cost of manufacturing any article, be it hats or shoes, plows or hoes, washing machines or typewriters, books or newspapers, automobiles or steam engines, or electric light and power or telephone service. The greater the perfection demanded of parts and the greater the rapidity of wear-out of the machinery, the larger must be the replacement item in estimating the costs of conducting the business and manufacturing an output.

The education of a people is not any exception to this fundamental business law. The public schools are the chief factories of American citizenship, and the citizenship manu-

factured represents the machinery with which our national life is carried on. The losses of units in the process of manufacture, and the wear-out of these units when completed, calls for continual replacements merely to retain the level of intelligence, character, culture, morality, decency, idealism, and business and governmental efficiency to which we had before attained. This calls for the continuous training of the children of all the people in our schools, that we may pass on to the coming citizenry the accumulated knowledge and experience and training of the past. This is merely the preparation of the new generation to take the place of the older members of our citizenship as they retire from active work and die. Unless this replacement is provided for in full, the quality of the citizenship and the general intelligence of the people surely will decline. A large proportion — just how large we cannot say — of our billion and a half of dollars of expenditure per year, for the education of the twenty-five millions of young people, is merely an expenditure for units lost during the process of manufacture, and for replacement, depreciation, or obsolescence of completed units, as these terms are spoken of and calculated in the business world. It is the economic cost of merely holding on to the civilization to which we have in the course of centuries attained.

Education as development. There is another portion of our annual expenditures for education, though, which is spent for what in the business world is termed the development, or expansion, or extension of the business. This fraction of the whole is naturally much larger in some communities than in others. Some school systems are so poorly supervised, taught, and financed that they are almost entirely replacement institutions; other school systems are so alive and progressive and so well financed that they render a great service in the advancement of the public welfare

through the training of a citizenship of larger vision, higher ideals, more intrinsic honor, a wider culture, greater moral and physical stamina, and better conceptions as to what constitutes worthy home membership and civil and social usefulness. It is the latter type of school system, and not the former, that is making the significant contributions to the life of America to-day.

In a rapidly developing and a rapidly changing Nation, such as our own, it is very important that our schools have a sufficient margin over necessary replacement costs, to be able to make a real contribution to the extension and development side of our educational work. By providing for a replacement type of education only, we merely pay back to society the cost for the training we received; in extension and development work we make our contribution to the advancement of the race. Just as a country is richer, in an economic sense, when it has, at the end of a year, a million more live stock or trained workers or bushels of wheat than

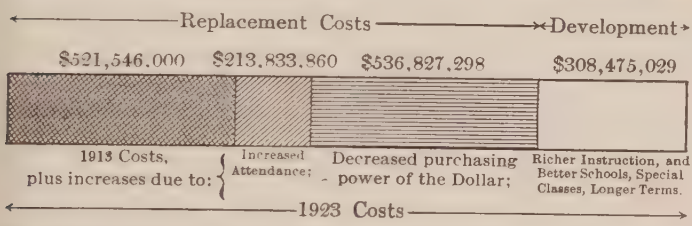

FIG. 6. INCREASING COSTS FOR ELEMENTARY AND SECONDARY EDUCATION 1913 COMPARED WITH 1923

(From calculations made by the Research Division of the National Education Association.)

it had at the beginning, so is a Nation richer in a political and social and spiritual and cultural sense when the output of its schools each year represents a group possessing a better insight into social needs, economic conditions, the work of government, and real national worth than do those whose

work they must soon take over and carry on. It is the continually increasing cost for this type of development service that constitutes the larger part, aside from variations in the purchasing power of the dollar, of the yearly costs for public education. A portion of the additional cost for education is of course due to our increasing population and the need for more schoolhouses, more teachers, and more books and supplies. Probably a still larger portion, speaking for the Nation as a whole, goes into the purchase of better and more sanitary classrooms, better teaching equipment and enlarged school facilities, better teachers and supervisors of instruction, and the dozens of new forms of education and guidance and service which our better schools to-day supply.

New demands on the schools. Every great modern war has been followed by a period of discontent with existing conditions and rapid changes. Sometimes a marked alteration in national direction has followed. Often progress is made in one or two decades which would not otherwise have taken place in a half-century or more. A profound discontent often takes hold of the people of a Nation. They are critical of established institutions, and they often recast their old forms and give them a different direction and purpose. In a democracy such a period is liable to witness many important changes, and in such a period the problems of democracy become the opportunity of the school. The present time with us is such a period. Probably not within the memory of the school men and women of to-day has there been a time when the instruction given in our schools has been subjected to such a critical examination and revaluation, or so likely to be changed in character and direction.

There is a new and a widespread popular interest in educational matters, too, and a common inquiry is as to just what kind of service our schools are rendering our children.

Education is being thought of more and more as something having a definite aim and purpose, rather than as training, or preparation for entry to some more advanced school. Our people want each step in the educational process to justify itself, and to bear some very definite relation to the life our young people are going to lead. While evidencing a belief in the importance of education greater than ever before in our history, our people want to be sure that the education they buy is the best that the money can purchase. Never, too, were our teachers and school officers more deeply aware of the importance of this questioning attitude.

The reconstruction of the school. The next ten years, in consequence, are likely to see many fundamental changes in the character, and purpose, and direction, and scope of American public education. The subject-matter of every course of instruction will be analyzed, and every topic taught will be made to prove its value in training for useful citizenship and service in the years to come. Much old subject-matter will be discarded for new subject-matter that can prove itself of greater value. The day of the single course of study for all children is about over, and in its place is coming diverging courses, guidance service, special classes, new types of schools and instruction, and new purposes in instruction that will better adapt the work of our schools to the many different types of children we now know we have in them.

To learn life by living it, to become acquainted with social and political forms by practicing them, and to come to know social and industrial processes by studying them, are now conceived to be fundamental purposes of the modern school. To create good standards and habits, to awaken the spirit of fair play and good sportsmanship, and to develop high ideals of honor and righteousness in social and civil life are new opportunities of the modern school.

Through community civics, studies in science and industry, studies of community life and needs, studies of home-life needs, health problems, work in the practical arts, drawing and music, thrift-training and a study of values, manners and conduct, plays and games, and the assumption of responsibility and training in self-control, the modern school will aim to train its pupils for greater social usefulness and to give them a more intelligent grasp of the social and industrial, as well as the moral and civic structure of our modern democratic life.

Development costs will be large. Such a period of educational reorganization and redirection as we are now moving into will of necessity call for large expenditures for what we have called developmental purposes. Mere replacement education will not suffice. What we do must be done better and in a better way. Courses of study will be rewritten. New teaching equipment will be provided. Many old-type school buildings will need to be discarded, because they can no longer serve properly the new educational needs. New school buildings with facilities for much special instruction and larger playgrounds will need to be provided in their place. New groupings of instruction will be developed, which will cost more to operate because a richer and a better type of instruction will be provided. Better-educated and better-trained teachers will gradually supersede those now in service. School supervision will become increasingly expert and exact and professional. Much new advisory and guidance service will be developed, with a view to saving waste through misdirection and failure. Learning by doing will be increasingly adopted as a guiding principle of the school. The sorting of pupils into groups where they can work more effectively will become a recognized feature of education, wherever groups large enough for subdivision are assembled. Part-time and evening-class instruction will be

developed far more than now. Health service and directed play will take on a new prominence. The defectives and the misfits, as well as the specially gifted, will be cared for far better than now.

All these new features, made necessary alike by the new national needs of to-day and our rapidly expanding knowledge of the educational process, will all necessitate new developmental costs. They are necessary extensions of our educational plant to enable the school to do a larger and a better type of business, and to manufacture a better article for society. They represent advancements, too, of the civilization which we have inherited, and are our contribution to world progress as represented in the education of the next generation of citizens.

A selective agency for society. When we first created our public schools we created them to promote literacy and citizenship. We also hoped to give to our people the elements of learning that they might be prepared for participation in the work of government. We believed that knowledge was power and that it led to virtue, and that if a man could read and write and cipher he had been given the tools that would fashion good citizenship. When we found that these simple tools would not suffice for such a purpose, and that a knowledge of the elements of an education did not create the capacity to use the gift of suffrage as we had hoped, we first added the history of our country, and then a course in civics in which the constitution and governmental forms were studied. While all this served a useful purpose and for a time was given much emphasis, the inadequacy of such instruction finally dawned upon us.

At last we came to see that real education for citizenship is a long and a somewhat difficult process, and that it calls for a reshaping of the whole life and work of the school, during the formative years of the pupil's life, to make of it a

training that looks toward intelligent citizenship. To-day we see the need not only for further educational extensions and the use of new forms of instruction in citizenship training, but also of different forms of training for different types of boys and girls. Instead of being merely teaching institutions, engaged in promoting literacy and diffusing the rudiments of learning among the electorate, our schools are to-day being called upon to grasp the significance of their moral, political, social, and industrial relationships, and to transform themselves into institutions for improving and advancing the highest welfare of the State.

Why our people believe in the school. That our people will support any necessary extensions and developments of the school can no longer be questioned. Once they are made to understand the purpose and need for the new developmental expenses — once they have been "sold the idea," to use a common expression of to-day — they will provide whatever they believe to be necessary. Despite a general desire for governmental economy and a lowered tax-rate, our people as a whole believe in education and are willing to support it as they are brought to see the need for so doing. This is because, as a people, we have come to see that the public school is a great specialized developmental and selective agency for society, and that in it the necessary training can be given and the selections made both better and cheaper than in any other way or place.

Still more, we in America, as was pointed out in the preceding chapter, have few other constructive tools with which to work. Into the public schools each year come millions of children — the prospective future citizens of our country. In the public school they are given the tools of learning; trained for personal service and for group coöperation; their ambitions are stimulated and directed; they are given an understanding of industrial life and social institutions such

as their parents usually do not possess; the best in their personality is developed; ideals for life are awakened; and they are guided into lines of work and service where they are likely to make the greatest possible success. All this, too, is done by a selected body of men and women who have been set aside by society for this special purpose, trained for the work at public expense, and who devote the best years of their lives to this special form of social service. The school thus renders a selective as well as an educational service of first importance in our democratic life, and one that neither the home nor the Church can any longer render in anywhere near so effective a manner.

Education as an investment. Our people will provide the increased funds also because far-sighted men and women everywhere have come to understand that money spent for good schools is an investment that brings in large returns. Every intelligent parent realizes this with reference to his own children; intelligent citizens understand it with reference to the development of their city school system; progressive States know that good schools generally attract an intelligent class of people, and we as a Nation have learned that no other expenditure we make contributes so much to the moral uplift of our people, to a higher civic virtue, and to increased economic returns to the State. It is investing money in the new generation which will take our place. As a people we believe the common constitutional mandate to be true, that

> A general diffusion of knowledge, learning, and virtue throughout a State being essential to good government and the happiness of mankind, schools and the means of education shall forever be encouraged.

As a people, too, we believe that what progress we make, from generation to generation, is largely determined by how well our public schools have done their work. However

much we may have lost interest in the old problems of faith and religion, the American people have come to believe thoroughly in education as the best means we have for the advancement of our national welfare.

We often feel that we make progress but slowly. It usually takes time to familiarize our people with the need for new organizations of and extensions to our educational systems. This is both the strength and the weakness of our schools. Once the need has been made clear, though, our people have supported the public schools in a way that they have supported little else in our national life. This has been largely because of a deep belief, supported by many facts, that expenditures for education give constantly increasing returns on the investment; that the States which support their schools most liberally are the ones that are most progressive and intelligent; and that the results of investments in education show in our national attitudes, our national character, and in the general intelligence, poise, good judgment, moral strength, initiative, productive capacity, and the happiness and contentment of our people.

The scope of this chapter. This chapter has dealt, in a very elementary way, with some of the broader aspects of the cost side of public education, such as would be treated in an introductory university course in *Educational Finance.* In this discussion we have tried to make clear the two big cost factors in our work of public education, and that education is a productive investment as well as an expense.

The chapter has also pointed out some of the new demands on our schools, as a result of changing America and changing world-life conditions, as well as the new directions in instruction which the school is now following and must continue to follow. This latter phase of the problem belongs somewhat to the field of *Educational Sociology,* but still more, as here treated, to a course on *The Elementary*

School Curriculum, or *Elementary Education*, or *Curriculum Studies.*

As the problem of financing our schools will be considered further in Chapters XXII and XXIII, and the problem of curriculum reorganization will be discussed more in detail in Chapters XV and XVI, the citation of any recommended readings, aside from the two short ones mentioned, will be omitted until these chapters are reached.

QUESTIONS FOR CLASS DISCUSSION

1. Are there any evidences, say in the past fifty years; (*a*) of a slackening in our social progress as a people? (*b*) of the sapping of our earlier religious, social, political, and intellectual ideals?
2. Show that never before in our history were we so dependent on popular education for the retention of the best in our culture, morality, idealism, government, and home life.
3. Show how a great in-rush of South Europeans might cause us to lose our mental balance and physical stamina.
4. May not some of the criticism of public education, for failure to develop moral and civic uprightness in certain individuals, be due to thinking that the more fundamental traits of character are imparted by a training that has aimed at literacy? Illustrate.
5. Show how the position we took in the World War — the "Notes" of our President, and our idealism — really placed us as a Nation in a position where we cannot well afford to neglect our contribution to civilization through education.
6. Describe a school system that is working on a replacement level.
7. Show how the changing character of world civilization, as well as the life immediately about us, calls for increasing expenditures in education for development.
8. What would be some development expenditures in a small city school system? In a large city school system?
9. Show why one effect of the World War has been to make us more critical of the work of the schools.
10. Is the tendency to ask for definite aims and purposes in what we do in our schools a good one? Illustrate.
11. Turn to the chart on page 17, and show how the changing conception of the purpose of education is expressed in the changes in subject-matter for each period.
12. Show how the school as an institution is a selective agency for society. Illustrate.

EXERCISES AND PROBLEMS

1. Consult *Money Value of an Education*, by A. C. Ellis, published as Bulletin No. 22, 1917, United States Bureau of Education, and see what it contains to substantiate the idea of education as an investment.
2. Look over the *Report of the Committee on National Aid to Vocational Education*, published as House Document no. 1004, Sixty-Third Congress (Washington, 1915), and see what it contains that shows that money invested in technical education is a very important national investment.
3. Think over conditions in your community, and show that what is now being spent there for education has a large (or small) developmental and investment value.
4. Think over illustrations in history, of individuals who have paid back to society large moral, or civic, or cultural returns for the education they received.

COLLATERAL READING

Cubberley, E. P. *Changing Conceptions of Education*, part III.

Ellis, A. C. *Money Value of an Education;* Bulletin 22, 1917, United States Bureau of Education, Washington.

Pittenger, B. F. *An Introduction to Public School Finance.*

Report of the Committee on National Aid to Vocational Education. Sixty-Third Congress, House Document no. 1004. Washington, 1915.

CHAPTER IV

THE ORGANIZATION OF EDUCATION IN THE UNITED STATES

State systems of education. When our government was finally established, the Federal Constitution made no mention of education. Nor does the subject appear anywhere in the debates of the Constitutional Convention. The great task of the Convention was to establish a stable government for the country, and to do this all questions of minor importance were left to the future for solution. One of these was education, in all its forms. By the Tenth Amendment to the Constitution, ratified in 1791, which provided that "powers not delegated to the United States by the Constitution, nor prohibited by it to the States, are reserved to the States respectively, or to the people," the control of schools and education passed, as one of the unmentioned powers thus reserved, to the different States to handle in any manner which they saw fit.

As we have pointed out in an earlier chapter, not much was done in the matter of schools in the first century of our history, though many State Constitutions early made some mention of or provision for education. The early constitutional provisions varied all the way from no mention whatever of education (New Jersey), a provision for pauper schools only (Pennsylvania), and provision for low-priced schools (North Carolina), to a strong firm mandate directing the legislature to encourage schools and learning (Massachusetts). In the early provisions for education we find faithfully reflected the three type attitudes toward education described in Chapter I. It was some time, how-

ever, before the demand for a system of public schools to supplement and in part displace the private, charity, and church schools of the time made itself felt, resulting in these constitutional provisions being enacted into school laws. After about 1835 the State constitutional provisions as to education began to be rewritten and increased in length, and requirements were more minutely specified. This tendency has increased with time, until to-day a modern State Constitution usually contains a long and detailed Article on public education.

Early school legislation. The first permanent law for the organization of schools was enacted by the State of New York, in 1812; New Jersey first provided for the education of pauper children in 1820, and created schools for all in 1838; Ohio first authorized taxation for education in 1821, and the law of 1835 made the real beginnings of a school system for the State; the first school law in Illinois dates from 1825; Philadelphia was permitted to organize free schools in 1816, though the first Pennsylvania school law dates from 1834; Baltimore began schools in 1825, and Maryland enacted an optional school-organization law in 1826; the creation of the Massachusetts State Board of Education in 1837, and the appointment of Horace Mann as its Secretary, made the beginnings of State oversight and control of the existing schools in that State; North Carolina enacted an optional county school-organization law in 1839; and the Indiana school system really dates from 1849, though the first permissive law goes back to 1824.

Many of the early State laws relating to education were merely general permissive laws. They granted to the people of the different communities of the State the right — if they cared to do so — to meet and organize a school district and to tax themselves thereafter to maintain a school. They were much like present-day laws that permit of the

organization of a local drainage district, road-lighting district, or mosquito-abatement district. If people want such benefits enough to be willing to organize and pay for them, the State merely permits them to do so. In other States the early laws were even more special, in that they merely authorized some city, or county, or cities of a certain size, to form a public school corporation and levy a local tax for schools.

Gradually, though slowly, permission was made general and then changed to compulsion, State aid was provided, the powers of the district school officers were defined, and a *School Code* for each of our States has gradually been built up. The school laws of each of our States to-day represent an important historical development, and the *School Code* contains a large, important, and a constantly expanding body of law. Still more, school legislation has become one of the important interests considered at each meeting of the legislatures of our various States.

The State the unit. In all this development it should be noted that the authority and power has come from the State, and not, except secondarily, from the community. This is an important point to be kept in mind. The school district, the town, the township, the village, the city, and the county are all subordinate creations of the State, erected by the State for purposes of local administration. The State has created these subdivisions of itself, and then endowed them with their powers. These powers it may add to and subtract from, as it sees fit, within the limits set by the Constitution of the State, and as the best interests of the State may seem to require. It has been the people as a whole, then, represented in the legislature of the State, and not portions of them here and there, who have been supreme in the matter of educational legislation. The State thus stands, in the matter of education, as an expression of the

combined will of all the people, and not of any one portion here or there.

Such has been the history and policy of practically every State, and it is supported by all the administrative experience relating to public instruction which we have accumulated since we first began to adopt education as a function of the State. Such a line of reasoning, too, has been continuously set forth in the decisions of our State Supreme Courts. School trustees may act only in pursuance of law. A city charter cannot enforce provisions in conflict with state law. The legislature may take away powers it has once granted. A city school district and a city as a municipality are separate and distinct corporations, even though their boundaries are the same. The educational rights of children are paramount. The city council cannot directly control the actions of the school board, except as provided by State law. Trustees and school officers must do what the State school law requires, and must establish the types of schools specified in the law. That the State may establish standards below which communities will not be allowed to fall, and may compel an observance of them, has repeatedly been laid down in court decisions.

These are type decisions of our highest State courts. They are based in part on the fundamental theory as to the nature of the State itself, in part on the now well-established principle that "the whole State is interested in the education of the children of the State," and in part on the conviction that the State cannot leave so important a matter as public education to the whims or caprices of individual communities.

Throughout all our educational history it has been the voice of the State that has ordered children educated, advantages extended, standards raised, and taxation for education increased. Whenever a majority of the people have

become convinced that educational advances should be made, the legislature of the State has registered such a conviction in the form of a new law, and the gradual creation of a series of free, common, non-sectarian, State school systems has been one of the notable achievements of our democratic States. The State, throughout all our history, has been the unit in all legislative progress and control.

Delegated authority. Ultimate State control, however, does not of necessity involve immediate State direction and oversight in anything. The State may delegate its authority, in whole or in part, to the subdivisions it creates within itself for purposes of local administration, and may at any time withdraw or change the previous delegation or transfer. As a matter of fact every State does so, though some do it to a much greater extent than do others. In the early period of our educational history the delegation of authority seemed necessary to get schools established at all. Beginning about 1850, though not becoming prominent for three or four decades afterward, our States began to take back the more important of these delegated powers.

An examination of the *School Law* of any American State will reveal not only the character of the school system provided, but the extent of the delegated authority as well. Though the management and control of the schools of any district or town or city may be placed by law in the hands of locally elected officials; though much liberty of action may be granted locally by the State; and though the large burden for the support of the schools may fall on local sources of taxation — the schools nevertheless exist to carry out a State purpose, as expressed in the Constitution and School Law of the State, and the local governing authorities act as agents of the State and can do only those things which the State law permits of being done.

Powers not enumerated in the law are usually held by the

courts as not existing; schools not conducted in conformity with the law may have their State aid withheld; and local failure to comply with the mandate of the law may result in court action to compel compliance, or even in the State school authorities stepping in and assuming control of the schools that the educational rights of the children of the community may be protected.

Building-up the State school system. Since about 1900 the process of revoking the delegated authority has been especially marked in nearly all our States. The process has been one of the transference of powers from small communities to larger school units, in the interests of greater efficiency in school administration. The little school district has been forced to surrender many powers formerly held to the township or the county, and the township and county in turn to the State. On the other hand, some powers formerly held by the State have been passed down to the county or district to handle, because they are better able to do so than is the State.

Examples of such a transference of powers from smaller to larger units of administration are abundant. The rights of parents to make individual contracts with teachers; to determine whether or not their child shall go to school, or whether or not they themselves will pay taxes; and the right of parents assembled in district meeting to dictate the choice of a teacher, or to say whether a school shall be maintained this year or not, are examples of powers originally possessed by parents, but which the State has now almost completely taken away. The right of the school trustees of a district to waive the requirement of a teacher's certificate, or themselves to certificate the teacher they select, has been superseded by township or county certification, and these, in turn, have been replaced in many States by uniform State teachers' certificates. Uniformity in text-

books and courses of study, with the city, county, or State as a unit, has displaced the earlier plan under which each school in such matters was a law unto itself. Uniform laws relating to length of term, type of school or schools which must be maintained, subjects of instruction, type of school building, sanitary conditions, compulsory attendance of children, and taxes which must be raised have likewise superseded the earlier policy of leaving each district full authority in all such matters. On the other hand, State uniformity in textbooks and courses of study have in some States been given up, and each unit of supervision (city, county) allowed to select and make its own.

Such legislation has naturally gone further in some States than in others. In some a very large degree of local control and decentralization is still the rule; in others the centralization of power in the hands of the State authorities has become so great as to exert, at times, a cramping influence on the progress of the schools. State control of public instruction has many advantages, but it has some disadvantages as well, and the purpose of wise educational administration must always be to utilize the advantages while minimizing the disadvantages as much as possible. As a whole, the advantages outweigh the disadvantages.

The State's proper functions. Up to a certain point, varying somewhat in different States and with the type of schools maintained, State oversight and control are desirable. Too much local liberty may mean, and often does mean, a weakness in the school system that is highly undesirable. In such matters as the keeping of records, financial accounting, bookkeeping methods, uniform fiscal years, and uniform statistical reports, the State should prescribe and enforce such a degree of uniformity as will produce intelligent and comparable returns. In all such matters as types of schools which must be maintained, length of school term,

education and certification of teachers for the schools, the supervision of instruction, building and sanitary standards, forms and rates of taxation, terms for compulsory attendance, and child-protection laws, it is essentially the business of the State to determine the minimum standards which the State will permit in any school or class of schools. It is also both the right and the duty of the State to increase these minima, from time to time, as changing conditions or new educational needs may seem to require or as larger finances will permit. To do so the State must often expect to render some new assistance to those communities least able to carry the additional burden, and this the State must be prepared to meet.

On the other hand, those charged with the administration of public education ought to guard carefully against unnecessary uniformity in non-essential matters, or a uniformity which may tend to stifle the higher educational activity of any progressive community. It should not be forgotten that nearly all the substantial progress which has been made in public education in our country in the past three quarters of a century has first been made by some city school system, free to act in carrying-out and testing a new idea, and such freedom in any worthy line the State should be careful to respect. There is a constant danger that this may not be done as the centralization of State control of education proceeds. Uniformity makes administration more machine-like and easier to handle. It also appeals strongly to certain types of minds, and often is extended to include non-essentials to a degree that is both irritating and unnecessary. Between the two extremes of too great laxity and too great uniformity the State's greatest service to its local communities and to itself may be rendered.

A good State educational policy. It ought to be essentially the business of the State to formulate a constructive

policy for the development of the educational system of the State, and to change this policy from time to time as the changing needs of the State may seem to require. This should involve more than the mere regulation of schools, and may properly include oversight of such essentially educational agencies and efforts as libraries, playgrounds, health work, and adult education. Instead of merely collecting and distributing taxes for schools and acting as a statistician and a lawgiver, the State should transform itself into an active, energetic agent, working for the moral, intellectual, social, and political improvement and advancement of the people. The formulation of minimum standards for the various forms of public education; the raising of these standards from time to time; the protection of these standards from being lowered by private or parochial schools; and the stimulation of communities to additional educational activity are fundamental rights and duties of the State.

On the other hand, to find what can safely be left to local initiative and control, and then to pass this down to local communities to handle, ought to be as much a fundamental principle of action as is the taking-away from communities of control in matters which they are no longer able to handle with a reasonable degree of effectiveness.

To see that the State purpose in education is carried out, and to exercise some form of control over the local school subdivisions, all our States have evolved some form of State administrative control. The form, scope, and powers of such a State administrative organization vary greatly in the different States, there being as yet no standard type.

The chief State school officer. A common feature of each of our American State school systems, including Porto Rico, Hawaii, Alaska, and the Philippines as well, is the election or appointment of a chief State school officer. When elected

by the people the most common title of such an official is Superintendent of Public Instruction; when appointed by the Governor or the State Board of Education, the most common title is Commissioner of Education. Superintendent of Schools, Superintendent of Common Schools, Superintendent of Free Schools, and Secretary of the State Board of Education are titles also in use. The first such official was in New York State, which provided for a Superintendent of Common Schools in 1812, but abolished the office in 1821 and did not re-create it until 1854. The first State to provide for such an officer and retain the office to the present was Michigan, which provided for a Superintendent of Common Schools while a Territory, in 1829, and for a Superintendent of Public Instruction when entering the Union, in 1837.

Prominent among the earlier duties of such an official were the collection and publication of educational statistics; the preparation of blanks and forms, and their distribution; the interpretation and enforcement of the school laws of the State; the apportionment of State funds for schools; and the visitation of the schools of the State. Among the newer duties to be added are the certification of teachers, and the supervision of teacher training in the State; the recommendation of textbooks, and the approval of courses of study; the inspection and accrediting of schools; the supervision of agricultural and vocational education; and the decision of school law controversies. The tendency generally is to increase the powers and duties of this official, and especially is this the case where he is an appointed officer.

The State Board of Education. Another common feature of State educational organization in our States is a State Board of Education. The first State board for educational purposes was the Board of Regents of the University of the State of New York, created in 1784 and continued to the

present time. The first permanent State Board of Education, in the modern sense, was that created for Massachusetts, in 1837. By 1852 five other States had created such a board, and to-day all our States have some form of a State Board of Education.

The most important work of such a board is the selection (where not impossible because of constitutional provisions) of the chief State school officer (Superintendent, Commissioner) for the State; the determination of the larger lines of State school policy; the exercise of general supervision over the schools of the State; decision as to new work to be undertaken in the State; adoption of rules and regulations for the general control of the schools of the State; and recommendations to the legislature as to educational needs and legislation. The State Superintendent or Commissioner should be the chief executive officer of the board, and should occupy a position in the supervision of the schools of the State similar to that held by a Superintendent of Schools in a large city. The board should hear reports and decide what is to be done, but it is the chief school officer or his deputies who should act to carry out the decisions reached. The State Board of Education is a legislative body; the Superintendent or Commissioner is its executive officer.

County educational control. Each of our States is divided into a number of counties, of varying size. There are approximately 3100 counties in the forty-eight States. In all but two of the States, outside of New England, the county also is used as a subordinate administrative unit for the control of education. County Boards of Education and County Superintendents of Schools are commonly found, though they do not exist in all our States. In the New England States, Delaware, and Nevada neither is found. County boards of education are not found in all States having county superintendents of schools.

The office of County Superintendent of Schools began about 1835, and by about 1870 had become common in the States. Everywhere, at first, the office was created as a statistical, financial, and clerical office, and often it was evolved out of some other county office. It was created to act as the agent of the State in the county, and as a means of communication between the State educational office on the one hand and the many little school districts scattered throughout the county on the other. The superintendent recorded changes in the school district boundary lines, looked after expenditures and funds, saw that the teacher possessed a teacher's certificate, collected figures as to attendance and expenditures, and visited the schools and advised with the local school trustees. His duties required no special educational training. These duties being not unlike those of a county auditor or a county clerk, and the office being created at the time when full manhood suffrage had but recently been attained, nomination by political parties and election from among the body of the electorate seemed the natural and proper method of filling the new office.

Despite the vast changes that have since been made in the nature of education, this method still remains the most common plan for selecting the head of the school system for our counties. In consequence, except in the county-unit States, to be referred to a little further on, and the work of a few especially capable and energetic superintendents here and there in the elective States, the office of County Superintendent of Schools — an office of large possibilities for educational usefulness — has not as yet attained to the position of educational leadership that will some day come to it.

As new duties have been given to this officer as an agent of the State by the delegation of authority from above; as

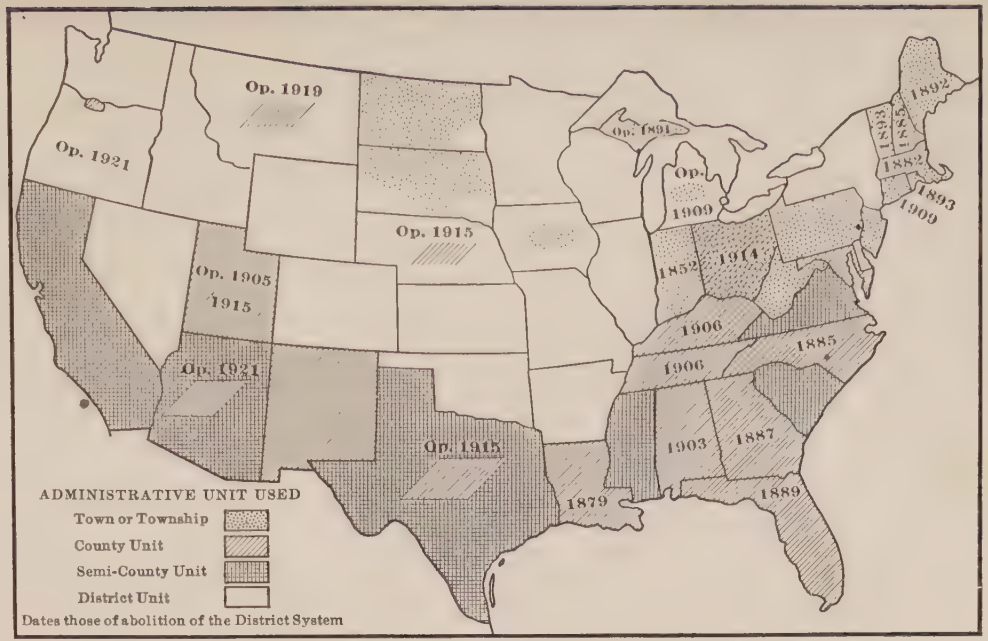

FIG. 7. FORMS FOR SCHOOL ADMINISTRATION USED IN THE UNITED STATES

"Op." means optional organization under a larger unit permitted, at date given. Nevada and Delaware combine a state unit with district organization, without any intermediate administrative unit.

many powers have been taken away from district school trustees and concentrated in the county office; and with the recent rise of a profession of school supervision requiring technical knowledge and skill, an entirely new professional aspect of the work has been added to the earlier clerical and statistical and visitorial functions. The demand to-day in consequence is that professional supervision be provided for our town and rural schools which shall be as close, as effective, and as professional as that which city schools everywhere to-day enjoy.

The County Board of Education. In a number of our American States some form of county board for school control, commonly known as a County Board of Education, has been created by law with a view to the better carrying-out of the State's educational purpose in establishing schools. To such boards either advisory powers or new educational functions have been given, in order to improve the administration of schools within the county. Some of these boards have but few legal duties and do but little; others are almost entirely concerned with the certification of teachers and course of study work; a few have some supervisory functions as well. The members of these types of boards usually are appointed by some county authority; often are selected from among the best of the teaching corps; and are paid for the work they do.

In a few States county boards of education of quite another type have been developed. In these States, known as county-unit States, all the schools of the county, outside of the larger cities, have been consolidated into one county-unit school system. For the control of such a county school system the people elect a small county board of education, which has about the same powers and duties as a city board of education for the control of a city school system. This type of county board has control of all the schools of the

county, outside of separately organized cities; selects and appoints the county superintendent of schools, and determines his salary and term of office; and on his recommendation appoints all principals, teachers, janitors, and other employees for the schools of the county. It also fixes all salaries, furnishes all supplies, pays all bills, and levies the necessary county school tax. It also has power to establish or consolidate schools as it deems best; may establish high schools and erect buildings therefor; holds title to all school property under county control; and provides such special schools or instruction as the county superintendent of schools may recommend and the board may approve. Such a plan involves a rather simple reorganization of the schools of a county, after the plan of good city organization and based on the best of city administrative experience. We have excellent examples of such a reorganization in the county-unit school systems of Maryland, Florida, Georgia, Louisiana, and Utah. It merely applies to the management of our rural and town schools the best experience of our cities in the management of their schools, and gives to rural and village children many of the educational advantages which children in our cities almost everywhere enjoy.

The town and the township systems. In a few States, as has just been mentioned, the county has been made the unit for educational administration, but in many of the States outside of New England the county is still further subdivided into smaller administrative units for the more detailed administration of the State's educational system. These subdivisions arose early in our educational history, and while their use is no longer necessary and their continuance is an obstacle to good school administration, they seem to be so deeply established in the thinking of our people that a change to larger administrative units is hard to secure. These smaller administrative units are the Town in

New England and the Township in the North Central States, and the School District everywhere outside of New England and the county-unit States, with the exception of a few States where the township is the smallest unit used.

The New England Town is an irregular area, containing usually from fifteen to forty square miles. Its boundaries are formed by hills, streams, or old roads, and the town thus has natural geographic boundaries. Many of the towns of

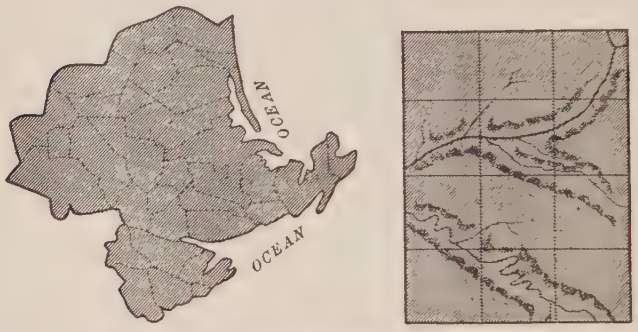

FIG. 8. NEW ENGLAND TOWNS AND WESTERN TOWNSHIPS COMPARED

Essex County, Mass. Area, 497 square miles. 34 towns.

Huntington County, Ind. Area 386 square miles. 12 townships.

New York State, the townships of New Jersey, and the townships and boroughs of Pennsylvania are similarly bounded. The Western township, on the contrary, is a regular area usually six miles square. The town in New England has one government for all its area, and one school board has charge of all schools in the town, be they city, town, or rural in character. The New England school town is thus much like a county-unit school system, except that the area is smaller. In an Indiana township, on the other hand, a village within the township is nearly always independent of township control, both in administration and finance. The New England town is thus much superior to

the Western township from the point of view of schools, as in it uniform educational facilities are provided and a uniform tax-rate levied.

Both town and township, while once regarded as desirable units for use in school administration and for financing schools, have proved — under modern educational conditions, with modern ease of travel, and with modern distribution of taxable wealth — too small for effective work. While distinct advances over the district system which they displaced, both are too small for proper administration and school support, and good educational organization will be promoted in proportion as some larger unit supersedes them. In New England this is taking place through the formation of supervisory unions, where from two to six towns are united under one superintendent of schools, and a town-union school system is thus created. In the Western States the township lines, running as they do regularly across the county, seldom follow natural community boundaries, and in addition the township is usually too small. In consequence, in the formation of good consolidated schools (Chapter XXI) township lines are disregarded, while with the coming of good roads much larger areas than a township can be formed into a consolidated rural or town school.

The school district unit. The school district was the natural unit in the days of the beginnings of our schools. It was well adapted to a time of limited intercourse and little general interest in public education, and before State or county school officers had been created. It was especially well adapted to the day of small things, and to schools which gave instruction only in the rudiments of knowledge.

Originating in New England, as a phase of the break-up of the earlier religious towns, it spread to the West and South and became firmly established at a time when no

larger unit was possible. The result is that to-day, after nearly all the conditions which gave rise to the district form of school organization have passed away, and when new social and educational needs are almost imperatively demanding larger educational and taxing units, a better form of school supervision, and a different type of rural school, the little district unit is tenaciously held to by the rural people in many of our States, and largely because they remember its earlier advantages and are blind to its present defects.

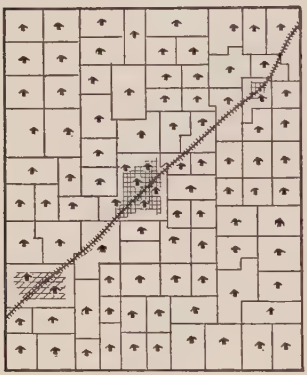

FIG. 9. DISTRICT ORGANIZATION
86 rural school districts, 2 towns and 1 county-seat city.

The essential feature of this unit is a small irregular area which furnishes children to a small one-room school. The people of the district elect three citizens to be trustees, or school directors, and these three meet and elect the teacher, fix expenses, make rules and regulations, and manage the school. Usually their powers are large, and the supervision over them by the county superintendent of schools is small. As a system for school administration it is expensive, inefficient, short-sighted, and unprogressive, and the trustees often assume authority over many matters they are not competent to handle. It leads to a great and unnecessary multiplication of small and inefficient schools, and to the creation of a horde of unnecessary school officers. Some of our States have as many as eight, ten, and twelve thousand districts, with three times that number of elected school trustees. There is no longer any business or educational reason for such a unit, except possibly in sparsely settled

mountain communities. As a means for providing schools the district unit has rendered its service, and an entirely different type of rural and town school administration is to-day needed, as we shall point out in Chapters XX and XXI, to meet the educational needs of those of our children who grow up in the towns or on our farms.

The city school district. There is one form of the school district which constitutes an exception to what has just been said, and that is the city school district. Legally, in most States, the city school district is regarded as only a country or village district grown large. By reason of its size, though, the compact nature of its population, and its peculiar needs and problems, it represents a special form of district to which it is customary to give special and added powers. While it is necessarily a part of the State educational system, and expected to meet the standards set by the State, it is usual to expect more of the city than of smaller communities generally.

The board of school trustees now is commonly increased in size and changed into a board of education; they are allowed to employ their own superintendent of schools, and fix his salary; new and added types of educational advantages are permitted and required; taxes may be levied in a different manner; and larger freedom in what to do and how to do it is allowed.

As a result, most of our best administrative experience in the field of public education has been worked out in our cities, and the greatest contributions to educational organization, administration, equipment, instruction, and the extension of educational advantages have been made there. The cities have drawn to them the best trained teachers and the ablest school administrators, and they have given to their children a high grade of educational service. Once they, too, had their school districts, with separate boards of

trustees, but they early got rid of them and unified the administration of all their schools under one city board of education. This board hears reports, examines proposals, and legislates, while the executive officers it employs carry out its decisions and supervise the instruction in the schools. Largely as a result of the unified organization, administration, and finance in our city school districts, one finds there a variety of educational facilities such as could not possibly be arranged for under any other than a centralized form of educational and financial management. Only under some form of large-scale educational organization can important educational advantages be provided for at all. This important truth our district-system States need to learn.

The scope of this chapter. The subject-matter of this chapter has dealt with some very fundamental questions of State educational organization and control, and the conception of the unity of the State's educational system, regardless of its many subdivisions created for administrative purposes, has been presented. How the State exercises control over its school system, and the subordinate units, boards, and officers it uses in so doing, has also been described.

The problems considered in this chapter belong to the study known as *State School Administration*, and are usually covered in the first part of a course bearing that title. The same questions are also usually considered in the first part of a course on *Public School Administration*, as it is usually given in our colleges and universities. Such courses try to present the legal organization of our schools, the types of schools to be provided, their organization and supervision, how they are financed, the teachers for them, and the children in them, in so far as State supervision and control are concerned. The chapter which follows continues the consideration of these same fundamental questions.

QUESTIONS FOR CLASS DISCUSSION

1. Under the Constitution as it now stands, could Congress legally enact laws declaring public education to be a national undertaking and under the control of Congress?
2. For what does the Constitution of your State provide with regard to education?
3. Explain, more fully than does the text, just why the State must be the unit in education, health, welfare work, and similar undertakings, even though the chief initiative may come from the local subdivisions.
4. Explain just what the courts mean when they say that a city and a school district are separate and distinct corporations, even though their boundaries are the same.
5. If the provisions of the State *School Law* and a city charter are in conflict, say as to the term of office of the superintendent of schools, which must give way? Why?
6. Why have our States recently been forced to gather up their delegated authority regarding education?
7. Do you know of any local power or duty that, in your State, has been taken away by the State?
8. What units and forms of school administration, and what officers and boards, do you have in your State?
9. If a district-system State were to change to the county-unit system, so that there would be only one county-unit school district, and one or two or possibly three city school districts in each county, could the school law then be much simplified and larger liberty given to these districts? Illustrate.
10. What do we mean, educationally, when we say that the State ought to become an active energetic agent working for the improvement of the school system of the State? Illustrate.
11. Compare the work and influence of a county superintendent of schools in a county-unit State, with that of a city superintendent of schools. Similarly compare the work of a county and a city board of education.
12. Show that, as regards public education, the relations of a State to its cities is essentially and necessarily different from the relation with reference to other municipal functions.

EXERCISES AND PROBLEMS

1. Take a copy of the *School Code* of your State, or of any selected State, and examine it, in the light of the discussion of this chapter, and estimate:
   a. The degree of centralization of authority in the State that exists in educational control.
   b. The extent of the required uniformity in non-essentials, and in essentials.

c. The nature of the powers of the State Superintendent or Commissioner.

2. Estimate the effectiveness of the educational administration in the subordinate units in your State — that is, in county, township, or district — compared with good city school administration, so far as you know, and can estimate from the law.
3. Look up the history of the educational development in your State, or in any selected State, and say how far what exists is the work of a few leaders, and what evidence there is that some one planned carefully for development; or, on the contrary, has the development been piecework and without any definite plan.

COLLATERAL READING

*Chancellor, W. E. *Our Schools, Their Direction and Management*, chap I.
Cubberley, E. P. *Public School Administration*, part I.
Cubberley, E. P. *State School Administration*, chap. V.
*Draper, A. S. *American Education*, chaps. I–IV.
*Dutton, S. T., and Snedden, D. *Administration of Public Education in the United States*, chaps. IV–VII.
Hollister, H. A. *The Administration of Education in a Democracy*, chaps. I–IV.

CHAPTER V

OUR SCHOOLS BOTH STATE AND LOCAL INSTITUTIONS

Growth of State school control. As has been shown in the preceding chapter, it is the State which has been the unit in all the process of organization, reorganization, delegation, and subordination that has taken place since the beginning of our educational history. The power to direct changes, extensions, and improvements in the types or kinds of education provided by the local subdivisions has clearly been a power of the State. That schools first arose locally and privately without State permission, and later were organized as public schools under State permissive laws, has in no way altered the fundamental principle that the State, and not the local school district, is the ultimate source of authority. The school district, town, township, city, and county are all subordinate creations of the State, and as such derive their powers from the State.

Any other conception would not be in accord with our historical development. While education everywhere, in the early days of our history, had a local origin and was organized from the community outward and upward, as the State school system developed, it arose, nevertheless, in conformity with permissive laws enacted by the State. The first district schools formed and the first district taxes levied were under the authority of permissive State legislation. When the State changed permission to obligation compulsory taxation for schools was provided for, and when the State began to grant aid to the districts for school support the basis for State school supervision was laid.

When the State decided that schools should be free and equally open to all, it put an end to tuition charges and the pauper-school conception of education. When the State ruled that schools should be free from church control, it ended the giving of any form of public aid to denominational schools. When the State permitted the organization of high schools, it decided that opportunity should be provided, at public expense, for more than elementary-school training. When the State established normal schools, it paved the way for the eventual training, at public expense, of all who are to teach in our public schools. In compulsory school-attendance legislation the State superseded the home in deciding the importance to the child of the education provided. In curtailing the abuses of the district system, or abolishing it entirely; in insisting upon educational standards and an adequate school term; in ordering the provision of attendance officers; in reinstating teachers illegally dismissed; in formulating a State building code; in providing for health work in the schools; and in many other ways the State has asserted its authority in matters of education. The source of this authority lies in the State Constitution, and the expression of this authority is found in the school laws.

The constitutional Article on education. A reading of the Article on education in any of the recently formed State Constitutions will leave no doubt but that education has become an important State interest, or that the State is the real unit in educational affairs. There is usually a "Mandate" at the beginning, recounting the importance of education and directing the legislature to provide for a system of public instruction for the State. This is commonly followed by a definition of what units or divisions or schools shall constitute the State school system, and how they shall be organized and controlled. A State executive officer for the system and a State Board of Education are nearly always

provided for, and the main powers and duties of each are defined. The items that go to form the State school fund are enumerated; the sale and lease of the school lands are provided for; protection of the State school fund from legislative diversion is attempted; and what shall constitute the State school tax and fund, and the basis of its apportionment, usually are laid down. Aid for sectarian schools and sectarian teaching is prohibited; the minimum school term is stated; and the certification of teachers usually is required. Often the form of government for the normal schools and the State university is specified; and the support of the State university is made mandatory on the legislature. Other important provisions at times are included in the constitution the better to safeguard the educational interests of the State.

Throughout all the above-enumerated provisions, the authority of the State is clearly implied or asserted, and the directions given the legislature and the governmental subdivisions of the State are often mandatory in character. While State legislatures cannot be compelled to enact laws to carry out constitutional provisions relating to education, except by the force of public opinion, the State courts have been watchful to prevent the misappropriation of funds or the enactment of legislation not in accord with the constitutional requirements.

The State School Law. An examination of the volume of *School Laws* of any American State will reveal still further the State character of the school system which has been provided. Though the management and control of the schools of any district, or township, or city, or county may be entrusted to locally elected school officers; though much liberty of action may be granted to such officers by the State school laws; and though the large burden for the support of the schools may fall on local sources of taxation —

the schools nevertheless exist to carry out a State purpose, as expressed in the State Constitution and the State school laws, and the local authorities act as agents for the State and can do only such things as the State allows them to do. Even where a school board seems to act independently and adopts rules and regulations which govern the administration of the schools, it does this by virtue of a State school-law provision which permits local boards "to adopt rules and regulations, not inconsistent with State law," for the government of their schools.

Sometimes the published *School Laws* of the State are a well-organized code, logically arranged, in which it is easy to find what one looks for. The system of organization and administration is first stated, and the scope of the educational system permitted or required is then laid down. The subjects and types of instruction in day and evening schools, adult instruction, vocational education, and part-time schooling are described. The powers and duties of all school officers are usually quite fully stated. The method of financial support is given in detail, as it relates to funds, expenditures, bonding, and reporting of expenses.

Requirements as to the heating, lighting, sanitary provisions, exits, and grounds of school buildings are specified in many particulars. Health work, physical education, and health supervision are provided for. The furnishing of textbooks, teaching supplies and equipment, as well as library books, is required. The age, training, certification, appointment, tenure, salary conditions, and retirement of the teachers are described. The school census, requirements as to attendance, the enforcement of compulsory attendance, child-labor regulations, and the general rights and duties of school pupils are given. Supplemental rules and regulations for the government of the schools, as adopted by the State Board of Education, and directions as

to how to keep the Classroom Register and make the required reports, are either included as an Appendix to the *School Laws* or published separately. With many of these provisions teachers need to be familiar, and superintendents of schools with nearly all of them.

Still more often, instead of being a logical and carefully organized code, as just described, the published *School Laws* are a jumble of miscellaneous legislation, put together in any kind of a way, with no order or system. In such collections only a careful use of the Index, itself often as poor in organization as the laws themselves, will enable one to find the legislation one wishes. For the study of such a code a well-organized *Digest* is exceedingly important.

Advantages of State control. Through its power to determine the minimum standards that will be approved for money grants, the State has a great opportunity to formulate a forward-looking educational policy for the schools of the State. If it can do this without curtailing desirable local liberties or hampering local progress, it is good for it to do so, as the overlooking or slighting of this "major claim" of society may thus be prevented. Regardless of what may seem necessary for fire, police, water, sewers, parks, streets, roads, or other needs, the neglect of public education can be prevented. In the perpetual city and county struggle for funds, the school authorities can be assured of sufficient sums to maintain their schools properly.

The disadvantages of State control lie chiefly in the tendency to establish government by uniform regulation and to impose a senseless red-tape type of control on the one hand, and on the other in the ease with which interested groups — citizens, teachers, organizations — can go to the legislature and secure school legislation to advance some personal or local interest, or of a type that some local school board has refused to grant for good reasons.

While important general laws governing the conduct of schools are enacted by the legislature, much important regulation is to-day made effective through rules and regulations adopted by our State Boards of Education. These boards have recently come into possession of much power, by delegation from the legislature, through their right "to adopt rules and regulations, not inconsistent with law, for the government of the school system of the State." In the case of regulation by such State boards the advantages outweigh the disadvantages, though the latter are by no means absent. The difficulty, where there is difficulty, lies largely in that power to control has come to such boards faster than they and their executive officers have learned to use it.

Much local liberty, nevertheless. When we pass from State laws and State control to a consideration of local control, we often think that too large liberty of action still rests with the local school authorities. Especially is this true in the strong district-system States, where the powers still left with local school trustees and the people of the districts are often so large that they seriously interfere with the proper conduct of the schools. Inexpert local authorities are often given larger powers of control than are given to the County or the State Superintendent, and many of the powers still entrusted to them are powers which they are not able to use intelligently.

The selection of the teacher, for example, which is a power still left with local trustees and boards, is too often made on some personal basis, rather than on the basis of educational qualification and ability to conduct a good school. The power to visit the school and to inspect and direct the work of the teacher, which State laws generally give to local trustees, involves expert knowledge of school supervision which local school authorities cannot possess. The powers to select textbooks, determine what subjects of instruction

shall be taught, and decide what apparatus and library books and supplies shall be purchased, often involve much educational and financial waste in their exercise. The annual financial and statistical reports the trustees are required to make commonly have to be sent back for correction, often more than once — a process that involves both delay and waste. The power to decide how much or how little the teacher shall be paid, what repairs shall be made to the school property, how long a term of school shall be held, and how much tax for schools shall be levied, are powers which too often result in close local economy and in inefficient and unattractive schools.

It would be better for the child in the schools if practically all these powers were taken from the local school trustees and transferred to county educational authorities, for handling in a way that would secure rather uniform results throughout the county. In every district-system State one finds inefficient schools, maintained in poor and unsanitary buildings, which would be abandoned for better educational facilities were the State to change to a county-unit form of educational administration. The trouble in all these cases lies not so much in wilful neglect on the part of the local educational authorities, as in ignorance of proper educational standards that ought to be maintained.

Examples of poor local control. A few cases illustrating poor local control, all of which are actual cases that have come to the author's attention, will be given to show the large liberty of action in important matters still left with local school authorities.

1. A small city, having a good union high school located on a tract of thirty acres, and two poor elementary schools located on city half-blocks, refused the free gift of a site on one side of the high-school grounds for a large and complete elementary-school building, and built the school on a small city block near the busi-

ness section, largely through fear of being brought under a common supervision with the high school if they built on the same grounds.

2. An incorporated village, needing a new elementary school, erected a large and expensive building at one edge of the town, on a main automobile highway, and so situated that all pupils had to cross the highway to reach the school. The land selected was low, poorly drained, and not especially desirable, as the site was noisy and dangerous to pupils, but the location enabled the town to "show off" the school building and thus advertise the town.

3. A small city recently erected a new elementary-school building, from plans made by a local architect and the school board, with window placing of a kind commonly used about 1880, and with poor interior arrangements and room lighting. It was located on a half of a small city block, and with almost no play space aside from the streets. The trustees said much of their record for economy with the taxpayers' money.

4. A board of high-school trustees recently dismissed their high-school principal, over the protest of nearly all the parents, because he insisted on being given the needed authority properly to manage his school. The trustees claimed that they were the authority for all school control, and that the principal should make no rules or regulations and incur no expense whatever, except as he first consulted them and secured their approval.

5. A new majority in a town board of school trustees, having been elected on an economy platform, reduced the salary of the principal and teachers, with the result that the former and most of the latter resigned. They also cut expenditures for school supplies, and refused to renew the insurance policies on the schoolhouses. Later, one schoolhouse burned down, and was in consequence a total loss to the district.

6. A superintendent of city schools, in visiting a high school in another city, was invited by the principal to speak to the pupils and did so. The school board passed a resolution censuring the high-school principal for acting without having asked their permission, and forbade any further talks to the pupils except as authorized by the school board.

7. A new high-school principal, finding that school dances were held in town halls and out-of-town resorts, arranged to bring all school dances to the high school and put them under school supervision. The school board, hearing of this, met and forbade the use of the high-school building for dances, and any teacher to attend the dances.

The trouble in all such cases. The trouble in all these cases lies primarily in a wrong conception as to what the school board should do, and in part to too large local liberty of action. The school board, acting from the point of view of local feelings and prejudices, misinterpreting the letter for the spirit of the school law, and possessed of large liberty of action under the law, can easily make serious mistakes without knowing that it is making them, and may undertake to do things that a board of citizens, acting without professional advice, is hardly capable of doing. Elected to deal with the larger problems of school control, the board often neglects these and devotes its attention to details that should be left to the superintendent or the principal to handle. Often unwilling to seek and follow expert advice, boards make many serious mistakes because of sheer ignorance as to the proper handling of their problems.

A large degree of local control has always been a marked feature of our American educational systems. Even if the people do make many mistakes and often mismanage the education of their children, they have always clung tenaciously to their right to make mistakes and to manage their schools as they choose. In a way, this has in the past been one of the strong features of school control with us. It has interested the people in the schools, and they have given time and labor and taken criticism for their right to manage or mismanage them as they saw fit. There comes a time, though, in the growth of any institution, when efficient organization and management demand that direct local action by the people, or by their representatives, be given up for action by selected expert officers working over larger units of administration.

Need for general legislation. Public education has now reached this stage in its development with us. Once a simple affair, dealing with instruction in the mere rudiments

of learning and at a time when little was generally known as to the art of teaching, education has to-day become a complex process, and skillful teaching to-day requires high technical ability. The problem now is to select out and take away from inexpert local authorities those powers and functions which they can no longer handle as well as can be done by transferring them to boards or expert officers of larger jurisdiction, and, on the other hand, to pass back to local authorities any powers or functions which they do not now have but might handle without disadvantage.

For example, schoolhouse construction and architecture have by now become expert work, involving much technical knowledge, and the details of schoolhouse construction ought not longer to be left to inexpert local school boards or architects to determine. On the other hand, it is desirable that local communities be allowed as much liberty as can be used intelligently in the matter of the kind and size and appearance of the building, and the grounds they are willing to pay for. The solution lies, then, in permitting large local liberty as to cost and type; in deciding many such matters as lighting, heating, door-swing, stairways, sanitary arrangements, and construction standards once for all by a general State school-building law; and then seeing that State standards are met while at the same time allowing large local initiative in form, architecture, and artistic expression.

Similarly, the unjust dismissal of teachers or principals can be handled by providing for an appeal from the decision, under certain circumstances, to the State Superintendent or Commissioner of Schools; the unnecessary cramping of the schools financially can be prevented by State laws calling for a certain length of term and amount of school support; and some form of insurance of school buildings could be required generally.

The problem of intelligent local control. How to retain

as much local interest and initiative in matters of public education as is possible, and at the same time secure efficient educational results, is our problem. Unlike European nations, where the school system has been thought out largely by the leaders of the State and handed down to the people in well-organized form, our school organization and methods of control have come up from the people. The American, free, non-sectarian, public school is our most important cultural contribution to the advancement of our people. As our citizenship has gained in intelligence and culture the control of our schools has grown better and better. There is in consequence a universality of interest in the United States such as, until very recently at least, was found in few other countries of the world. This interest and sentiment has led to the creation with us of some of the best schools and school systems to be found anywhere; our problem is to increase the number of them.

We have made very rapid progress in educational organization and administration during the past quarter-century, and to-day we have a critical citizenship that is demanding still better organization and administration and instruction for our schools. This critical citizenship also sees education as a State and a National problem, as well as a local one. These people naturally want to see the schools go ahead. On the other hand, there are many communities that have not as yet come to conceive of education as of such fundamental importance. They regard education as more of a local interest, and the schools as serving largely local ends. Such school systems are in the main "home schools"; the teaching positions are retained as far as possible for "home girls"; and the tendency is to retard educational expansion and to keep down the school tax-rate.

Between these two types of communities the State must mediate. To the first it needs to give large liberty of action;

with the second it must often use compulsion. The solution lies in a careful State-wide study of educational conditions and needs; the formulation in the State *School Law* of State educational standards below which no community can be allowed to drop; and, from time to time, an increase in these standards that the whole State may move forward in the provision of education for its children. Such State action will force the less progressive communities to advance in the manner the State may decide to be desirable. The more progressive communities, on the other hand, need liberty and the opportunity to exceed the standards set, and to undertake new experiments and expansions.

In nearly all communities, though, there is need for influences and work that will inform the people not only as to educational needs, but also as to what standards in school administration it is desirable to maintain. School boards often act unintelligently and against the best interests of their schools because they do not know any better method of action, and the people often support them in their rulings for the same reason. To remedy such a situation is extremely difficult, because it involves the education of a community to better standards. This is difficult and requires time — often much time. It is the eternal problem of democratic government, of how to get the masses to see and understand what the more intelligent classes know. It is the problem of community education.

The scope of this chapter. The subject-matter of this chapter gives a background for the study of the legal school system of any State as embodied in its constitution and laws, and the working of the legal provisions in practice as shown by statistical studies of the results. Many of our States require that prospective teachers make such a study during their period of training, that they may know something as to the legal structure underlying the schools and the compara-

tive standing of the State's school system. Often something as to the history of the development of the school system is added, and sometimes a comparative study is made between what is and what ought to be.

In all such study the lines of historical development come out clearly, and the student finishes the work with a better conception than before of the important constructive service performed by those who laid the legal foundation of the State's school system, and by the authorities of the State in protecting and advancing the educational interests of the children of the State. The unity of the educational system of the State comes, as a result of such a study, to possess a significance to the student not felt before.

QUESTIONS FOR CLASS DISCUSSION

1. Show how "when the State began to grant aid to the districts for school support the basis for State school supervision was laid."
2. Name two ways in which your State has asserted its authority in educational matters, other than those enumerated on page 78.
3. Why have we commonly taken the power to certificate the teacher away from local boards of school trustees?
4. Why do trustees usually hang on so tenaciously to their right to purchase school supplies and control expenditures?
5. Is it less democratic for the people of a whole county to determine educational policies, rather than by school districts? Why?
6. Could a board of school trustees spend money for hauling children to school, if transportation had not been provided for in the *School Law*?
7. The *School Law* provides that teachers may be dismissed from service, during the year, for "insubordination, incompetency, immorality, or neglect of duty." Could a board dismiss a teacher for violating a local by-law forbidding her to dance?
8. Give an example, each, of the advantages of large State oversight and control of the education provided by local communities, and of a possible disadvantage.
9. Give half a dozen examples of minimum State standards that your State enforces on local communities.
10. Of the seven cases given on pages 81–82, what ones would you attempt to prevent by State regulation or general law, and how; and what ones would you leave to communities as their right to make mistakes on? Why?

11. Show how and in what ways public education has recently become much more difficult for local school boards to manage intelligently.
12. Suppose you were a teacher in a small place, or a principal or superintendent in a larger place, where the local conception of education was low and the standards for teaching service poor. What could you do that would be helpful in improving matters?

EXERCISES AND PROBLEMS

1. Take the *School Code* of your State, or of any selected State, and the *School Code* of the State of Osceola (see reference, below), and study the two comparatively to determine:
   a. The comparative inclusiveness and worth of the constitutional Article on education.
   b. The general type of the School Law, as to organization and evidence of well-thought-out structure (taking any subject in the law for comparison).
   c. The character of the powers entrusted to local school authorities.
2. Do you know of any Supreme Court decision in your State that clearly confirms the authority of the State in the matter of education? If so, what does it say?

COLLATERAL READING

*Chancellor, W. E. *Our Schools; Their Direction and Management*, chap. I
Cubberley, E. P. *Public School Administration*, chap. II.
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CHAPTER VI

THE SCHOOL BOARD AND ITS PROBLEMS

The local school board. One of the most characteristic features of local school administration in the United States is the presence of a school board, composed of local citizens, which acts as a board of laymen for school control in the school district, town, township, county, or city school district. Despite much State control, these local boards still possess rather large powers. Usually the members are elected by the people, though sometimes in cities they are appointed — usually by the mayor of the city. In the rural school districts they are nearly always elected by the voters, the board usually consisting of three citizens, one member being elected each year for a three-year term. Women are commonly found in the membership of all kinds of school boards. In the towns and the consolidated school districts the board is usually composed of three or five, though still larger numbers are sometimes found. In county-unit States a County Board of Education of five members is ordinarily the rule. In the cities there is no common plan. Some boards are quite large, and some are small; some are elected to represent wards within the city, and some are elected from the city at large. In still other cities the mayor appoints the members of the school board.

In the New England towns the local boards retain the old seventeenth-century title of School Committee. This title is used also in a few States elsewhere to designate the boards of School Trustees, or School Directors, elected for the management of the rural schools. In the cities generally throughout the country the common title used is that of Board of Education.

Selection and organization. While the cities alone seem as yet to have no definite plan for the organization of their school boards, within recent years a decided tendency has become evident to reduce their membership from large, unwieldy, and unbusinesslike bodies to smaller and better organized boards. Large boards are always talkative boards, often their procedure is ill-advised, and commonly

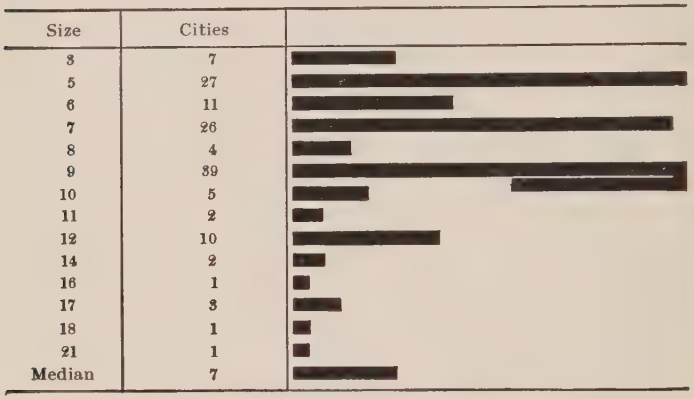

FIG. 10. FREQUENCY OF SIZE OF SCHOOL BOARDS
In cities having from 25,000 to 100,000 inhabitants.

they are divided into groups or factions primarily interested in political or other advantages, rather than in the promotion of the best interests of the schools. On the other hand a small board is far less talkative, it handles the public business more expeditiously, responsibility for action is more easily placed, and it cannot and will not pass out favors and patronage in the way that a large board nearly always does.

As these defects and advantages have become evident, legislation has been sought that would provide for a change. Sometimes the change in size and method of selection has been made by the people themselves, by amendment to their

city charter, but more commonly the change has been made — for all cities in the State and at one time — by an amendment to the general State school law. The tendency everywhere has been to reduce the membership to a small uneven number — five, or seven, or nine being most common; to elect or appoint the members in such a manner that only a small number will go out of office at any one time; to require that their election or appointment be from the city at large, instead of from wards; and to give the members rather long terms. Such changes reduce the school board to a small businesslike body capable of meeting around a small table, and able to discuss matters in a simple and direct manner and to transact the school business expeditiously, and with the interests of the schools uppermost. It also eliminates ward politics from the board.

Best present-day practices. Along with these changes has come another of importance, namely, the general tendency to abolish the large number of standing committees that the older and larger boards once thought necessary to the transaction of school business. A school board of fifteen to twenty-five members used to have from ten to fifteen regular committees, to which all new business was first referred for investigation and report before any action could be taken. This resulted in frequent meetings, slow action, and much pulling and hauling between committees to get their reports adopted. Under the newer plan a board of five or seven considers most matters when presented and as a whole, appoints temporary committees only as needed, and acts on new business far more promptly than used to be the case. If there are to be any regular committees, two are all that are necessary — a committee for business affairs, and a committee for educational affairs.

To-day we consider the most desirable form of school board for a county-unit school district or for a city school

district alike to be a board of five members (possibly seven in large cities), one member chosen each year for a five-year term, elected from the county or town or city at large rather than from wards, elected rather than appointed, free to choose its own presiding officer and to adopt its own business procedure, having no standing committees, and not paid for its services. Such a board is more likely to attract the best citizens to its membership, select better teachers and school officers, provide improved educational facilities, place more dependence on its executive officers, and transact the school business of the community more expeditiously, intelligently, and quietly than any other type of local school board. The schools, too, are much more likely to stand well with the community than when under the control of the opposite type of school board.

Relation to the city government. Keeping in mind that the schools are in an important sense State institutions, established by direction of the State to carry out a vital State purpose, while town and city government is far more local in character, we can see why our laws have provided and our courts have held that a school district is a separate and distinct corporation from a town or city government, even though the boundaries may be the same for both. While this is true in theory, it is not always the case in practice. In fact, until relatively recently, school affairs and city affairs have been very much entangled. The school board has been elected at the city political election or appointed by a partisan mayor, city politics has come into the school administration, and the school board has been made dependent upon the city council for funds. To secure the needed revenues the board often has been compelled to spend the money in ways that failed to give the largest educational results.

Within recent years much study has been given to this

question of relationship, and the result of the inquiry has shown clearly the importance of keeping the schools free from political entanglements of all kinds. When the school district is clearly recognized as separate from the city government, when the people elect their school board independently, and when the school board determines its own tax-rate and budget of expenditures, we find that the best educational results are secured. Such independent boards, studies show, spend no more money than do school boards dependent on the city authorities for funds, but they spend a larger percentage of their money for general supervision of the instruction, supplemental school services, proper maintenance of school buildings, instructional supplies, and educational expansions. The dependent cities spend much more on salaries and personal service, and are much more deeply in debt.

In the present stage of the development of good city government with us, the student of education should be thankful that our schools are, in theory at least, State and not local affairs. Education is the most important constructive service maintained by any community. It looks to the future, and it is chiefly because the mass of our citizens do not appreciate the more distant aim of public education that the city governmental authorities so often try to subordinate the greater interest to more immediate city needs. Politically, departments with large patronage give more immediate returns, and the school department, when it is dependent on the city for funds, is expected to provide its share of the city patronage as well. Money consequently is spent on work and for salaries that in cities where the school board is independent is spent on better educational service. The results in the two types of cities are so distinct that to-day the tendency in legislation is clearly toward rather complete independence from the city

government for the schools, and particularly independence, within limits fixed by law, in the raising of the needed school revenue.

The school board as a body. The local board for school control, however constituted and by whatever title it may be known, is the successor in point of authority of the old town or district meeting, in which the people came together annually to decide school matters for themselves. Then they met and determined the length of the term, voted taxes, selected the teacher or appointed a committee to do so, and then turned over to the teacher the control of the school. Later on they voted to create a standing school committee to transact the business for them. Boards of school trustees in our rural districts and boards of education in our towns and cities to-day stand as the successors of the earlier school district meeting and school committee. The people now act through such boards as a representative body, and as such a body the boards manage the schools much as the people desire and the State school law permits. The school board members are merely citizens, selected to represent the people of their school district in the conduct of the schools. As individuals they are still citizens; only when the school board is in formal session do they have any legal authority.

It is the board, then, acting as a body and by recorded vote, that controls the schools, and this they do in the name of the people whom they represent and the name of the State which endows them with their powers. Individually and outside of the board meeting they have no authority; their authority is exercised only by votes whereby rules, regulations, and policies are adopted, and executive officers are instructed as to actions to be taken.

This is an important check on board activity from the point of view of the school superintendent, who, after all,

must carry out the school policy. The people frequently elect to represent them men of limited education and inexperienced in school affairs, and with no proper conception as to what constitutes good school administration. On assuming membership, conceiving that they have been elected to manage instead of merely to control the schools, they proceed to do so in a way that often causes serious trouble.

Following expert advice. A school board is nearly always a combination of diverse elements, and represents fairly well the general average of intelligence and progressiveness of the people of their community. They are usually honest and willing enough; the trouble commonly lies in that both they and the people they represent know so little as to what constitutes good school administration and proper school conditions. The pity of it is that, too often, neither they nor the people realize that the board is blundering and mismanaging the most important undertaking of the community. A close dependence on expert professional advice is the only safety for a school board which has a large and important school system under its control.

Nearly all cases of mismanagement, caused by the overactivity of school board members, are due to a misconception as to what the members were elected to do. A school board, in any size or type of school district, is elected primarily as a local representative body to assist in carrying out the State purpose of public education. Their great work is to select experts to advise them, and on their advice to determine the larger policies of the school system; to see that the provisions of the State school law are carried out; to approve of expansions in the school work or of new educational expenditures; to hold title to property; to award contracts, and to pay bills for services and supplies; and to approve an annual budget of expenditures and determine the local tax-rate for schools.

They have in no sense been elected to become a board of superintendents to supervise the detailed work of the schools. They are in no way competent to outline courses of study, select textbooks and supplies, pass on the quality of the instruction, select and assign teachers, or pass on the engineering and hygienic problems of schoolhouse construction. Instead, experts should be secured to advise them on such questions, or to act for them, and neither school boards nor their committees should attempt independent action on such matters. If the professional expert is competent the board is likely to act unwisely if it acts in opposition to his judgment. In case the board doubts the wisdom of his advice it should postpone action for a time, secure another opinion from some outside disinterested professional advisor, or employ a new expert whose judgment they are willing to follow.

The real work of a school board. This does not mean that a school board will have little left to do except to approve the recommendations of its superintendent of schools. On the contrary, once they give the detailed execution of plans and policies over to their paid employees, their time will be free to devote to the larger problems of their work as a board of school control. It is this larger aspect of the work that is generally neglected by school boards when they try to manage the schools. The people want, instead, that their board should select trained officers to conduct the schools, and then let them do it. It is the board's business to see that the schools are maintained on a high plane of efficiency, but not to do the work themselves.

What, then, are some of these larger problems upon which a school board will be called to act? A few of the more important ones will be enumerated here.

The first and in many ways the most important of all is the selection, from time to time, of its expert professional

advisor — teacher in a rural district, principal in a town, and superintendent in a city. In a larger city the selection of a business manager and a school architect ought also to receive careful attention. Upon the professional knowledge and good judgment of these advisors the success of the school system largely depends. When upon such a quest the board should take plenty of time, and should obtain the best professional advice available.

Another important problem, and one that should require time and careful thinking, is the selection of new school sites and the approval of plans for new school buildings. Especially will this be true in a growing city, where the school plant often needs to be relocated and made over. Still more will time and thought be needed if the form of organization and methods of instruction in the schools are also to be reshaped, along with the erection of the new buildings. The importance of time and attention given to this major problem is not likely to be overestimated, as a study of the school buildings provided by any community furnishes very concrete evidence as to the educational conception of the superintendent and school board who worked them out and approved them. A good modern school building is the embodiment of a well-thought-out educational idea and plan, and requires high professional knowledge and skill.

The determination of the annual school budget and tax levy are also important problems. While the preparation of the annual budget is the work of the board's professional advisors, its approval and defense is the work of the board. In a town or city making rapid educational progress this is a particularly important service. If funds have to be obtained by struggling with the council, the reason for every item needs to be clearly understood.

At times legislation is proposed, both by the city and the State, which is inimical to the best interests of the schools,

and at such times there is a real duty to try to prevent its enactment by pointing out its harmful nature. Often the local public needs information about the schools, and especially is this likely to be the case when the school system is being expanded, a new bond issue proposed, or an increase in taxes asked for. At such times the needs, policies, and reasons for the proposed action may call for presentation in the public press and at meetings of the citizens.

It is these larger problems of school control which are of fundamental importance, and it is these same problems that are most likely to be neglected when a school board forgets its real work and tries to become a board of supervision, attempting to handle the many details of school administration.

A clear separation of functions. In other words, a school board should act as a legislative body, and not as an executive organization. As the representatives of the people of the school district and the agents of the State, it is their work to consider proposals, estimate needs and costs, and to decide, by recorded votes, after discussion and the hearing of expert advice, the larger problems of school control. As the representatives of the State they are to see that the minimum demands of the State are met, and the required schools maintained; as the representatives of the people of the school district they are to sit in judgment upon proposals for doing more than the State demands, for the expansion of the school system, or any educational policies that are local in their nature. Once a plan or policy has been decided upon its execution should be turned over to the paid executive officers of the school system.

If a board desires information on any question, it should direct its executive officer to furnish the same. If it thinks the school work should be expanded or curtailed, it should propose the matter and ask for a report on it. In all affairs

relating to details of school administration, the school board should refuse to take any action until the matter has first been brought before the proper executive officer, and his decision should not be reversed except when he is clearly in the wrong. In strictly professional matters, such as the outlining of courses of study, the selection of textbooks and supplies, and the conduct of the instruction, the school board should act only on the recommendation of the superintendent of schools. In the daily conduct of the schools, the work of teachers and pupils, and the routine work of school administration, the board members as individuals should not interfere.

If such a clear separation of work is observed, given good executive officers and adequate finances, a school system — town, township, county, or city — should attain to a high level of efficiency. It is when school boards or board committees, anxious to direct and manage as well as control, seize administrative functions and begin to displace the chosen executive officers in the administration of the school system that trouble usually begins to develop.

Importance of the service. That such an intelligent service may be rendered by citizens requires the selection of men and women of the right type for school board membership. In many respects membership on a school board calls for a higher and a more intelligent type of community service than is called for on any other kind of local board. The persons best fitted for such service are men who have been successful in their business or their profession, who have learned to seek and act upon expert advice, and who are not afraid to spend money when that is the thing to do. Those least well fitted are politicians, inexperienced young men, unsuccessful men, ignorant men, petty business men, and old men. Women are often classed as desirable for district school boards and undesirable for city boards, be-

cause they are usually most interested in the detailed work of the schools as it relates to teachers and children, and usually least interested in the larger business and financial problems of school control. The crank, the hobby-rider, and the extremist — either men or women — should never be put on a board of education. The call is for business experience and grasp, ability to act rather than talk, self-confidence, courage, practice in selecting experts and relying on them for advice, tact and perseverance in getting things done, and ability to withstand pressure when upholding an adopted policy. The advantages of a small and well-selected board come out strongly here.

The service to a community and to the State rendered by a broad-minded and progressive school board, free from political, denominational, fraternal, and personal interests — one working with the best interests of public education constantly in mind, and extending to its executive officers the confidence and support and intelligent sympathy which tends to bring out the best in each of them, so that all connected with the schools feel assured of their wisdom and fairness — is of such importance that it is not likely to be overestimated. To few men in any community comes the opportunity for finer or more enduring service.

In addition to a willingness to render service, the position calls for some technical knowledge as to what the schools ought to do and be, and what are the best means for reaching the desired ends. It also calls for an acquaintance with executive relationship such as few men, outside of those used to managing large business undertakings, ordinarily possess. It would be well if all school board members, on taking office, would first inform themselves as to their proper work and duties by reading carefully some good textbook on public school administration — one that will give them a clear statement of the fundamental principles underlying

the proper organization and administration of our public schools.

The school survey in school administration. All that has been written so far presupposes that the schools are fairly well organized and officered, and are making reasonably satisfactory progress. This, however, is not always the case, and sometimes a school board faces another major problem in trying to find out what is the matter with the schools and their administration, and in what direction the school system ought to be traveling. To rely on personal opinion, either of themselves or of other citizens, is not likely to be satisfactory or to lead to anything other than friction and bitterness of feeling. The opinion of laymen then becomes balanced against that of the superintendent of schools, and laymen make the final decision. Another method is to make a comparative study of costs and the results obtained with similar figures for other school systems of like size. The difficulty with this method is that the other school systems may be good, bad, or indifferent, and the final result is an average of all and may itself be unreliable.

Within recent years a new method for estimating the efficiency and needs of a school system, as well as determining the direction it ought to travel, has been worked out in what has come to be known as the *School Survey*. Beginning first with the city school survey, in 1911, the method has since been extended to rural schools, township and town schools, county school systems, and to the school system of entire States. The method is now common and used everywhere, and the school survey stands to-day as the most important and most accurate means that a school board can use for educational diagnosis. Be it the instruction, finances, business methods, school buildings, or organization of the school system that seems to be wrong or to need ex-

pert reorganization, the survey by outside experts is the best means a school board can employ to find out just what is the matter, and what ought to be done about it.

Using the school survey as a tool, an important form of educational engineering has been developed. By its use the major needs of a school system may be determined, a more intelligent procedure in the organization and administration and supervision of a school system may be formulated, waste may be eliminated, better business methods may be introduced, and the returns on the investment of time and money and human effort put into education may be materially increased. As a result of the coming of the school survey, school administration is being changed rapidly from guesswork and the use of practical-experience methods into the science of increasing educational returns through the application of the best modern methods and procedures to the problems of the school. If a school board member would also read some good modern school survey report that is not too long, such as the *Boise School Survey* of 1919, it would add to his knowledge as to the problems with which he may have to deal.

The scope of this chapter. In this chapter we have dealt briefly with the more important aspects of the subject known as *Public School Administration*, but more particularly with it as it relates to the management of our town and city schools. Courses in this subject, or as they are more often called, *City School Administration*, are given in our colleges and universities generally.

Such a course deals with the organization and administration of our public schools, and its aim is to make clear to the student the fundamental principles underlying the proper conduct of schools — be they in a town, township, county, or city. The organization and work of the board of education, its important services, the work of the superintendent

of schools, proper school department organization and relationships, the educational work of the schools, the selection and work of principals and teachers, the business and clerical departments, pupil and cost accounting, records and reports, and testing results and measuring efficiency by school survey methods — these are the important topics in such a course. The work of such a course aims to give such an introduction to the subject of public school organization and administration as will establish in the mind of the student not only right principles of action, but also the reasons why they are right.

The *School Survey* and school survey methods and results often form another and a more specialized course in university departments of education. On the other hand, school survey reports are often read in connection with the course in *City* or *Public School Administration*, and the important bearing of the survey on good school administration is brought out. The application of proper administrative principles to the administration of town and county-unit school systems, as well as to good State school administration, also is emphasized.

QUESTIONS FOR CLASS DISCUSSION

1. Show why a school board small enough to meet, with the superintendent of schools, around a single small table is much more likely to transact the school business quietly and expeditiously and efficiently than a large board, where the members have separate desks scattered about the room.
2. Explain what you understand by a separation of legislative and executive functions. Does a State legislature or a board of bank directors assume executive functions?
3. Show that the existence of a number of standing committees — say on teachers, courses of study, supplies and books, buildings and grounds, janitors, rules, instruction, finance — is a constant temptation to board members to exercise executive functions.
4. What objections do you see to: (*a*) electing board members by wards; (*b*) paying them for their services; (*c*) appointment by the mayor or council; (*d*) from one half to all going out of office at one time; (*e*) election at a political election and on a party ticket?

5. How do you account for cities, dependent on the city council for school funds, spending so much on salaries and service and having so much higher bonded debt?
6. Why is it natural for a new school board member to feel that he has been elected to manage the schools?
7. Should a school board ever attempt, independently: (*a*) to plan a school building; (*b*) to outline a course of study; (*c*) to adopt textbooks to be used; (*d*) to select teachers for the schools; (*e*) to visit the schools and criticize the work of principals or teachers?
8. Explain why parents who generally know so little about the administration of a school system, have so much more confidence in a physician when their children are sick than they do in a school superintendent when they are well.
9. Show that a different type of school board member is required if a board is to devote its time and attention to the larger problems of school control, rather than the details of school administration.
10. May not part of the trouble our towns and cities experience in the administration of their schools be due to their electing the wrong types of persons to school board membership?
11. How do you explain the fact that the School Law of your State gives nearly all powers to the school board, even to the details of organization and administration, when all good modern theory says that they should rest with executive officers and that the board should be only a legislative body?
12. What do you understand to be meant by educational diagnosis?

EXERCISES AND PROBLEMS

1. Take a copy of the Rules and Regulations of some school board, and examine it to determine how well its practice, as expressed in the rules, conforms with the principles laid down in this chapter.
2. Study the organization and work of some city school board, as to plan of election or selection, membership, term, committees, relation to the city government, independence in action, character of work done, and relations with their superintendent, to see how well it conforms with good theory as to work.
3. Study the school buildings of some city you know, or have pictures for, and try to determine to what extent their character seems to represent a proper conception of the work of education on the part of the school board that built them.
4. Draw up a plan of procedure, with specifications as to kind of person wanted, to be followed by a school board in the selection of a new superintendent of schools.
5. Study the chapters on administration and school board activity in some good School Survey Report, and determine the character of the work done by the school board in the city surveyed.

COLLATERAL READING

*Bentley, J. H. "The Responsibility of the Board of Education in Modern School Organization"; in *Educational Administration and Supervision*, vol. IX, pp. 203–09. Also in *Proceedings of the N.E.A.*

*Chancellor, W. E. *Our Schools; Their Administration and Supervision*, chap. II.

Cubberley, E. P. *Public School Administration*, chaps. VIII, IX.

Deffenbaugh, W. S. *Current Practice in City School Administration.* (98 pp.) Bulletin No. 8, 1917, United States Bureau of Education.

Deffenbaugh, W. S., and Muerman, J. C. *Administration and Supervision of Village Schools.* (63 pp.) Bulletin No. 86, 1919, United States Bureau of Education.

*Draper, A. S. "The Crucial Test of the Public Schools"; in his *American Education*, pp. 77–86.

*Dutton, S. T., and Snedden, D. *Administration of Public Education in the United States*, chaps. VIII, IX.

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*Greenwood, J. M. "The Superintendent and the Board of Education"; in *Educational Review*, vol. XVIII, pp. 363–77.

*Hines, L. N. "The Ideal School Board from the Superintendent's Point of View"; in *Proceedings of the N.E.A.*, 1911, pp. 994–1002.

*Sears, J. B. *The School Survey*, chap. I.

*Sutton, W. S. "The School Board as a Factor in Educational Efficiency"; in *Educational Review*, vol. 49, pp. 258–65.

School Surveys. Five good ones, brief enough for use, are:

1. *The Boise School Survey*, 1919. (286 pp.)
2. *The Salt Lake City School Survey*, 1915. (340 pp.) Reprinted under title of *School Organization and Administration.*
3. *The Grand Rapids School Survey*, 1916. (510 pp.)
4. *The Nassau County (N.Y.) Survey*, 1918. (291 pp.)
5. *The St. Joseph (Mo.) School Building Survey.* (103 pp.)

CHAPTER VII

PROFESSIONAL SCHOOL SUPERVISION

The beginnings of school superintendence. There are to-day four main types of school supervision in the United States — State, township or town, county, and city. The supervising principal in a village or small city is merely a city superintendent of schools in process of evolution. Often his work is not different from others who have the full title.

These four types of school officers have arisen with us in about the order named. The first State Superintendent of Schools was in New York State, from 1812 to 1821, and the first permanent State school officer dates from 1829, in Michigan. By 1861, nineteen States and two Territories had provided for a State Superintendent of Education, and nine other States had designated some other State officer to act *ex-officio* as such. All States now have such an official.

Township superintendents of schools were created for New York State also in 1812, though there were few elsewhere before about 1835. By about 1860 the tendency was strong to abolish township superintendencies and substitute county supervision, which had in the meantime been established. Beginning about 1835, by 1861 ten States and one Territory had created the office of County Superintendent of Schools, and the development of this office was rapid after 1870. New England, on the other hand, after trying county supervision for a time and finding it but ill-adapted to its town form of government, abolished it and returned to town supervision. The town superintendent in New England to-day does not differ much from the supervising principal

found elsewhere, or the superintendent of a union of towns from a city superintendent of schools.

The first city superintendent of schools was provided for by the city of Buffalo, in 1837, and the second by Louisville, Kentucky, a little later the same year. By 1860 there were twenty-six cities in the United States where the office of City Superintendent of Schools had been created, and three more cities provided for such an officer before 1870. After

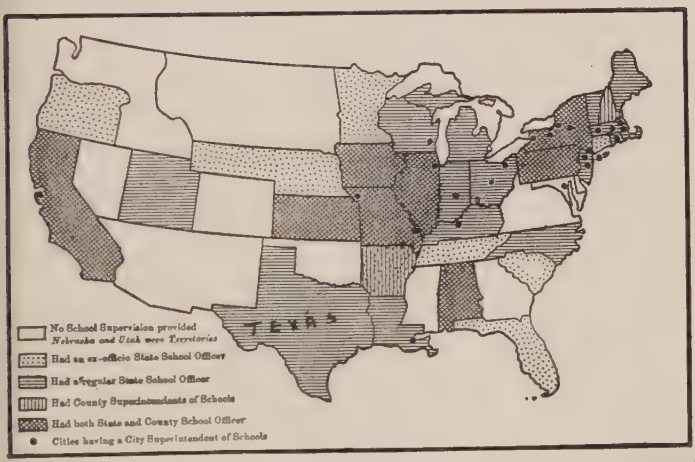
TEXAS
No School Supervision provided
Nebraska and Utah were Territories
Had an ex-officio State School Officer
Had a Regular State School Officer
Had County Superintendents of Schools
Had both State and County School Officer
Cities having a City Superintendent of Schools

FIG. 11. STATUS OF SCHOOL SUPERVISION IN THE UNITED STATES BY 1861

1870 the number began to increase rapidly, and since 1900 every city of any size has provided for such an official, while the smaller places have created the position of supervising principal. To-day nearly fifteen hundred cities in the country employ a person having the title of city superintendent of schools, and probably twice that number employ a supervising principal. In addition, a principal of a large consolidated rural school, of which there are now many, has duties analogous to those of a supervising principal. In

many of the larger cities the school system is comparable in size, and far more complex and difficult to conduct, than is a State school system. For example, the city of Minneapolis has as many children in school as has the State of Vermont, New Orleans as New Mexico, Cincinnati as New Hampshire, Milwaukee as Utah, and Cleveland as Oregon.

The beginnings of professional supervision. When Buffalo created the first city superintendency of schools in the United States, in 1837, though then a city of fifteen thousand inhabitants it had but seven one-teacher schools. Two years later the number was increased to fifteen, with a central school for instruction in the higher branches. Even then, though each school had a large enrollment, the school system was relatively simple and the supervision was almost entirely of a clerical and business type. Cleveland, in 1841, designated the secretary of the school board as "acting manager of schools," and he served in this capacity for twelve years before a real superintendent of schools was appointed. In Jersey City the first superintendents of schools were appointed from merchants and other business men, and in Cincinnati and a number of other cities the first superintendents were nominated and elected from among the local citizenship at the city election, much as county superintendents of schools still are to-day. The duties of these early superintendents of schools were analogous to those of a school clerk or business manager of to-day, though much simpler in character, as the school systems then were both simple and small.

Gradually, but slowly, with the growth of the cities, the development of the school systems, and the increase in the number of school superintendents employed, a professional spirit began to be manifest among them. After about 1880, with the growth of our cities and their school systems, the problems relating to the organization, management, and the

supervision of instruction in the schools became too technical for inexpert lay school boards to handle in any intelligent manner, and the result has been the rapid evolution of the professional school superintendent.

To such a professional officer, once evolved, boards of education have gradually delegated many of the duties and powers they themselves formerly exercised. The tendency in consequence has been to decrease first the number of school board committees, and next the size of the board itself, and to build up instead a permanent staff of officers and clerical employees who devote their entire time to the administration and supervision of the schools. Out of this development has arisen the new profession of school supervision, and the change of the school board from a combined legislative and an executive body to a legislative board only. In a well-conducted school system the professional staff now organizes, administers, and supervises the schools, while the school board decides the larger questions of school policy as brought before it, acts as a referee on disputed matters, and forms the legal and governing body which represents the people of the city on the one hand and the State on the other.

The delegation of powers. As the superintendent of schools has been evolved, and has with time come to represent a continually increasing amount of training and professional skill, both boards of education by special rules, and the State by general law, have guaranteed to him continually increasing powers. Often the board still holds the powers legally, but delegates them to the superintendent by tacit understanding. Acting in the name of the board of education and of the State, the superintendent now organizes and manages the schools and supervises the instruction in them. He deals with citizens, parents, teachers, and pupils directly, or through some person who represents him

and reports to him. On the larger questions of policy he confers with his board, but once a decision has been reached he expects his board to leave execution to him and his subordinates and to support the policy the decision represents. His board is thus analogous to the board of directors of a corporation, of which the local citizens and the State are the stockholders; he represents the superintendent of the business whom the directors employ as manager to obtain results for them. As the superintendent of the business he expects to enjoy the same kind of powers, freedom of action, and support from his directors, and to shoulder the same responsibilities, that the manager of a large business to-day enjoys.

The office of superintendent of schools in a city, then, becomes the central office in the school system, up to which and down from which authority, direction, and inspiration flow. The superintendent is the organizer and administrator of the work of the schools in all their different phases, and the thinking head of the school system. He represents the schools, and all for which a State system of public instruction stands, before the people of his community. He is the executive officer of the board of education, as well as its eyes, and ears, and brains. He is supervisor of the instruction in the schools, and also the leader, advisor, inspirer, and friend of the teaching body. So important has become the work of this new official, and so largely have boards of education been forced to delegate powers to him that the schools may be efficiently conducted, that it is not too much to say that about him and his work the schools revolve. What a school system is to-day in organization, administration, instruction, spirit, and purpose, and the position which the schools occupy in the eyes of the community, is very largely due to the intelligence, professional skill, courage, and vision of the superintendent of schools. What he is the

schools, under proper administrative conditions, become; what he is not they often plainly show.

In his work as a superintendent of schools, every superintendent who is effective carries on three lines of effort. We will consider each of these briefly.

The superintendent as organizer. Though a superintendent of schools may be appointed for but a year at a time, as most superintendents still are, on assuming office he almost invariably begins to plan as though he were to remain in the city all his days. His first work will be to make a quick mental survey of the position and equipment and needs and financial possibilities of the school system. This is his study of his new job, and he follows much the same methods and technique, though naturally working much more rapidly, as is used by the expert school surveyor. Out of such a survey of his work, his conferences with his board, and particularly from the background of his professional knowledge and past experience, he lays out for himself a more or less definite educational policy to be followed in the administration and development of the schools.

Such a policy of development may include many things — the school plant, the courses of study, new types of instruction to be provided, a better classification of the pupils, a reorganization of the instruction, textbook and supply needs, the work of principals and teachers, the selection and pay of such, playgrounds, part-time and evening school instruction, public school extension, and the general educational policy to be followed in the administration of the schools.

How fast a superintendent can proceed in such development will depend upon a number of factors, and how much of his thought-out policy he is wise in revealing, even to his board, he must estimate and use his best judgment upon. Legally the board of education is charged with the duty of

formulating and adopting the educational policies to be followed, and, as practically all new policies involve additional expenditures, this must naturally be true in fact as well as in law. The work of the superintendent is to shape and guide and stimulate the thinking of both the board and the community on educational matters, and to do this without appearing too prominently in the work. The board members and the community may see matters from quite a different angle from that of the superintendent of schools, and it is the task of the superintendent to answer their objections, if he can, and to convince them of the desirability and feasibility of what he proposes. Probably no part of a superintendent's work involves so severe a test of his organizing skill. The work is slow — often discouragingly slow — yet if a superintendent is to render real service to the community employing him, as the organizer and director of their school system, he must first think out, and then find means for carrying out, a thoroughly sound and constructive policy for the improvement and advancement of the schools under his charge. He may leave or be asked to leave next year; he thinks and plans as though he were to remain a lifetime.

The superintendent as administrator. As an administrator the superintendent plays quite a different part. He is now the chief executive officer of the school system and of the board of education.

While he may possess but little legal authority, except as the school board delegates it to him, still he must frequently assume rather large authority and at all times be in command. This calls for personal force, good judgment, practical business and political sense, frankness combined with courtesy, and courage and conviction at times when these are the proper characteristics to exhibit. He now, at different times, plays four rôles. To-day he is a petitioner before the

board, asking for some special thing; to-morrow he is a servitor, carrying out its orders, and doing so regardless of what he may think; the next day he seizes authority and issues instructions, and later reports what he has done to the board; at still another time he interrupts a board discussion to advise them as to what seems to him to be a better method of procedure. On many matters he must himself decide and act without bothering his board; only on questions involving new policy will he be careful first to confer with them. While some of the superintendent's rights are written in the form of laws or rules or recorded votes, he must not forget that many of the most important administrative rights to which superintendents have attained are as yet in unwritten form.

It is important, too, that not only the superintendent, but also the principal and the teachers establish good relations with the people of the community which supports the schools. Every contact with parents then is an opportunity not to be disregarded. A reasonable amount of publicity as to the work and needs of the schools is desirable. Opportunities to speak to the public are important. Parents need to be interested in what the schools are doing and trying to do. The stronger the confidence which a community comes to have in the good sense, honesty of purpose, fairness, and sound judgment of the superintendent and the principals, as the people come in contact with these officers in their administration of the schools, the heartier will be the community support of the larger educational policies the superintendent will from time to time need to advance.

The superintendent as supervisor. The third line of work of the superintendent of schools is one for which the other two have prepared the way. It is that which relates to his supervision of the work of special supervisors, principals, teachers, and pupils in the schools. In a small school sys-

tem this may be his main work, but as a system grows larger and larger the main energies and time of the superintendent are more and more called upon to break the way so that others may do this kind of work for him. Still, in all except the largest school systems, the knowledge and influence of the superintendent must in some way reach down through organization and administration and touch the work of teachers and pupils if his highest mission as a superintendent of schools is to be fulfilled.

All else that a superintendent may do — and this all else may be much and very important — is after all but getting ready for the most important of all services, that of bringing teachers and children together under the best possible conditions for instruction, and in turn seeing that this instruction is the best it is possible to secure. After all, this is the real reason for the existence of school board, superintendent, school buildings, teachers, and teaching equipment — it is the prime purpose of the school. The immediate responsibility for this often must rest with the school principals, but the general responsibility goes back to the superintendent of schools. To guide and develop this instruction continually, so that the children in the school may develop best and most rapidly under it, should be a deep interest of the superintendent of schools, even though, as the school system grows larger and larger, he must more and more delegate the work to the special supervisors and the principals of the schools to carry on.

General nature of the superintendent's work. While administrative and supervisory work in a large city school system tends to become somewhat specialized among a number of executive officers and their assistants, in a smaller city almost every phase of the work of organization and administration and supervision comes in time to the door of the superintendent of schools. To solve the problems suc-

cessfully as they arise calls for a high degree of professional knowledge, and at times for some genuine political skill as well. How varied the superintendent's problems are, and how much he needs to know, may be appreciated if we stop a moment and take a look at what he actually does.

At one time he is busy planning the further development of the school system under his charge, often looking into the future beyond the vision of his teachers, school board, or people. At another time he must be an expert on school organization, bringing to school board, principals, teachers, and people the best experience of other cities and the best thought on the problem at hand. At another time he is an expert on the details of schoolhouse construction, and on the proper location and maintenance and care of the school plant. At another time he is a business man, looking after purchases, budgets, and the larger problems of educational finance.

At another time he is a petitioner before the school board, asking for some improvement in conditions, some new grant of powers, or some change in ruling, and following this he is the servant of the board, seeing that its decisions are carried out. At another time he is an administrator, looking after the hundred-and-one little details of daily school administration — dictating letters, meeting people, smoothing out difficulties, eliminating friction, and adding to the confidence of the people in their schools.

At another time he is holding professional conferences with his principals and supervisors, much as a general would do with his brigade commanders, and mapping out the larger objectives of the year's work. At another time he is a supervisor of the teachers, directing them, inspiring them to larger service, and extending helpful oversight in their work. At another time he is protecting these same teachers in their employment, pay, tenure, and right to promotion. At another time he is an expert on the making and adminis-

tering of the courses of study, slowly educating those at work with him up to his larger point of view. At another time he is an expert investigator and tester of the work of the schools, and the progress of the pupils therein. At another time he is an expert on playgrounds and playground activities. At another time he must be the real authority back of the attendance officer, administering the law, and protecting the educational rights of children. At still another time he is voicing the needs of the children in physical education, or protecting their interests through standing behind the health officer in the discharge of his duties.

Central position of the superintendent's office. In a large sense of the word the superintendent actually does all the above things, though in a city system of any size much of what he decides and approves is finally carried out by those subordinate to him in position. These other workers in a school system are organized about the superintendent in a definite way, and bear certain well-defined relationships to him. A good form of organization and relationships, for a small city system, is shown in the organization chart given opposite.

It will be seen from this chart that the superintendent of schools occupies an important central position in the educational system. This is as it should be, and this is true for a school system of any size. While primarily an educational leader, he is also the executive head of the entire school system. While he may not actually perform many things, and ought not if he is to have time to do the thinking that the administration of a school system requires, he must nevertheless oversee and coördinate the work of all others if progress is to be achieved. He must also spend much time discussing policies and procedures with the board and its committees on the one hand, and with his department heads, supervisors, principals, and teachers on the other.

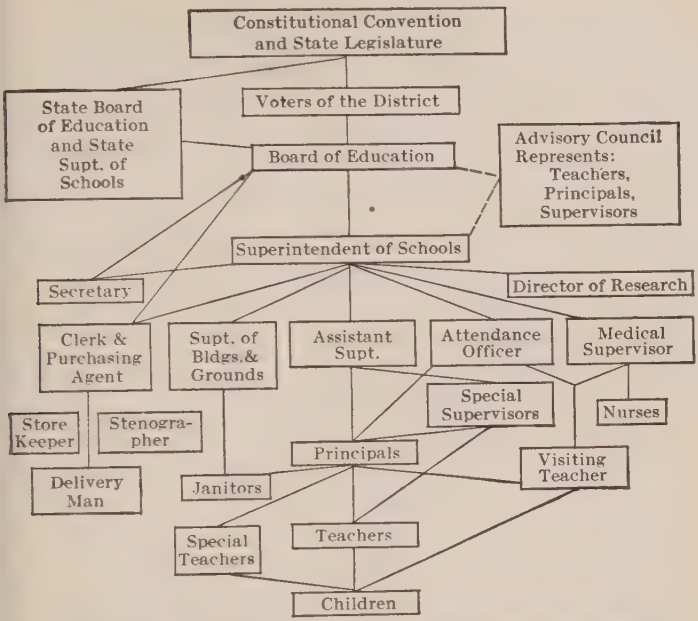

FIG. 12. PLAN OF LEGAL AND ADMINISTRATIVE ORGANIZATION FOR SCHOOL SYSTEMS IN CITIES OF FROM 25,000 TO 50,000 INHABITANTS

(From Sears' *The School Survey*, p. 68.)

It is primarily the task of a superintendent of schools to give character and tone to the whole educational organization of which he is the head. His view must cover the whole system. He must be thinking of what the schools should be doing, and of how to secure the desired results. Out of his clearer vision as to purposes, large professional knowledge and skill, and more mature judgment as to ways and means, he should give a definite trend to the thinking of everyone connected with the system, from board member to grade teacher. It is he, more than anyone else, who builds up and sustains the professional *esprit de corps* of all who work with him at the problem of public education.

A new profession. The position of superintendent of schools represents a new profession which we in America have developed, wholly within the past century, and very largely during the last fifty years. The opportunities offered in this new profession to men, and in time probably to women also, possessing strong character, broad sympathies, high purposes, courage, and executive capacity are not exceeded in any of the professions. No profession offers such large opportunity for a high grade of personal service. In working to enlarge the outlook and the appreciation of children, and in helping to improve the intellectual and moral and civic tone of a community, a personal satisfaction and reward comes to one that makes a peculiar appeal to certain fine types of men and women. Potentially, at least, and very often actually, the most important officer in the employ of any municipality to-day is the person who directs the organization and administration of its school system, and who supervises the instruction given therein. The call for superintendents of schools of the right type is to-day greater than the call for lawyers, ministers, doctors, or engineers, and the financial rewards are comparable.

It is important, though, that those who wish to enter the work, in addition to possessing the proper personal characteristics, be willing to take the time and spend the energy necessary to prepare themselves for large service. The general knowledge and cultural demands make a college education a minimum, and this must be supplemented by advanced professional preparation that is thorough and adequate. What is adequate, too, is a constantly increasing factor, as new courses and fields in the general subject of education are developed. A quarter-century ago there was but little organized professional knowledge, aside from teaching technique, and superintendents and principals still worked largely in the light of practical experience and judgment.

Wholly within the past three decades, and largely within the past two, a large number of important new fields in public education have been developed with which a superintendent of schools to-day needs to be familiar. Just as the practice of medicine has been made over in the past half-century by the application of the theory of the bacterial transmission of disease and the use of the microscope in diagnosis, so is educational administration to-day being made over by the application of diagnostic tests and statistical procedures to the work of instruction, the reorganization of instruction in terms of social needs, and the establishment of sound principles in school administration to replace the guesswork and local politics that once directed the schools.

Why county school supervision has not shared. In all this development, county school supervision has as yet shared but little. Outside of a few county-unit States, where county school supervision has been placed on approximately the same basis as is city school supervision, the county educational office is still a political office, held for short terms only, and limited entirely to the local electorate. In consequence the office has not shared in the great development that has come to the cities, and it remains to-day largely clerical and statistical and financial in nature, poorly paid, and limited in outlook to the few local teachers, or citizens, willing to engage in political candidacy to secure it. Nowhere, outside of a very few States, can one be selected for the office on the basis of training and professional competency, or hold the office on the basis of efficient service. Such characteristics it will continue to retain until it can throw off the incubus of popular election, cease to be political in nature and limited to the local electorate, and become as truly educational in the selection of the superintendent and the work he does as is the office of city superintendent of schools. This would be easy to accomplish, as

we shall point out more in detail in Chapter XXI, and it would work a wonderful transformation in the character and work and usefulness of the county educational office.

Some day in the future county school supervision will cast off the shackles now binding it and will become professional in character, as the city superintendency has done. Until such a change has been effected, however, the best trained young men and women will continue to go to the city to sell their services, and the cities will continue to hold a monopoly of the best-prepared workers and will continue to offer to the children of the city residents a training such as rural and village children might but do not enjoy. If there is any clear and unmistakable lesson to be drawn from a study of city school administrative experience, it is the importance of the selection of experts on a professional rather than a political basis, with freedom to go into the markets of the whole United States to buy the services of brains and competency for the schools.

It is in the cities, then, that the best of our administrative experience has been hammered out, and the fundamental principles of good school administration established. Because of their rapid growth and the changing character of their population, their educational problems have been large and often acute. Early uniting their schools into one city-unit school system, early ridding themselves of popularly elected superintendents of schools, and early forcing legislatures to give them freedom to go ahead, the cities in the past three quarters of a century have in consequence made the most distinctive contributions to educational organization. Our village and rural schools, on the other hand, lacking leadership and proper organization, have been unable to make comparable progress. It is to the cities, then, that one turns to study the problems of school organization and administration, and the work of the new professional officer — the city superintendent of schools.

The school principal. It is to the cities, too, that one turns to study at its best the work of that important subordinate educational officer, the school principal. The school principal occupies a peculiar and a somewhat confidential relationship to the superintendent of schools. The relation is analogous, in the business world, to the manager of a branch office to the manager or superintendent or president of the company. In each case the manager or superintendent or president is responsible directly to the board of directors of the business for the larger outlines of policy and the general success of the venture, while the manager in charge of a branch is responsible only indirectly to the board of directors, but is immediately responsible to the officer above him for the management and control of his unit in accordance with the larger lines of policy decided upon by those above.

In a school system, the superintendent and his principals hold somewhat complementary relationships. The superintendent is responsible to the school board and to the people of the whole city for the successful conduct of the whole school system; the principal is primarily responsible to the superintendent for the successful conduct of the single school of which he is the head. It is primarily the function of the superintendent to think and plan and direct and lead; it is primarily the function of the principal to execute plans and to follow and support. Just as the superintendent must decide many matters without conference with his board, so must a school principal decide many matters without bothering the superintendent about them.

The position of principal in a school system, then, is one of large professional importance, and the larger the school system the more responsible the position becomes. Upon the educational insight, largeness of vision, good nature, ability in administration, discretion, tact, personal loyalty,

and frankness in discussion of the principals of a school system the success or failure of the policies evolved for the conduct of the school system in large part depends. The position calls for certain personal qualities not altogether common, and in addition for sound professional preparation and training. The principal must not only be a good teacher, well grounded in teaching technique, and a good organizer and administrator, but he also needs to-day to be reasonably well trained in the professional subject of education.

We are not likely to overestimate the importance of the office of school principal. As the superintendent gives tone and character to the whole school system, so the school principal imparts these qualities to the school under his control. The best of supervisory organization cannot make strong schools where principals are weak and inefficient.

The principalship as an apprenticeship. The principalship of a school in an American city or town to-day offers unusual opportunities for personal growth and for community service to one who is studiously inclined and interested in children. Of all places in the school system the principalship offers the largest opportunity for a life of study and personal growth. This is equally true whether one regards the position as a permanent career or as an apprenticeship for a superintendency elsewhere. As a permanent position it gives leisure for study, while the school work, day by day, can be made experimental and fruitful. The monetary prizes are, perhaps, not so large as in business or the professions, but on the other hand the position offers many advantages that compensate.

To one to whom some form of social service makes an appeal the position of school principal offers advantages almost unequaled elsewhere for a very important and useful type of community service. Few who serve a city have

such opportunities for constructive work. Many of our cities have men and women who have served twenty-five to thirty years or more as the principal of one school building, and whose work has in consequence deeply moulded the lives of a generation of people.

From the point of view of an apprenticeship for larger work later on, a principalship is a student's opportunity. Four or five years may be well spent in an elementary-school principalship by one who desires to train himself for a school superintendency. Such an apprenticeship more than doubles the effectiveness of the previous collegiate and professional preparation. During these years the principal must be a student of educational processes in his school, and he must gradually crystallize for himself a good working educational philosophy to guide him in his later work and to vitalize all his later educational procedure. He must in particular seize intelligent hold on the conception that education stands for the higher evolution of both the individual and the race, and he must learn to relegate to their proper place in the educational scheme all the details of organization and administration and supervision that he learns and masters. Without such a guiding conception administrative work soon becomes dull and fruitless routine, and the principal a professionally dead and inefficient office worker.

The scope of this chapter. In this chapter we have presented the work of the new profession of school supervision, both as it relates to the work of the city superintendent of schools and the school principalship. The work of such school officers is studied in detail in university and college courses in *City School Administration*, and *School Supervision*, and the special work of the school principal is generally studied in colleges and normal schools in a course having some such title as *The Principal and his School, The School Principalship*, or *The Administration of a School.*

In the study of the work of each the threefold nature of the work of these two school officers — organizer, administrator, and supervisor — is presented and studied. The subject-matter of such courses represents a large, important, and a rapidly growing part of the professional subject of education. In universities generally there is frequently a separate professorship of school administration, and some universities have organized the work as a division having a number of professors in charge. Some day, and probably before very long, courses will also be given on *County-Unit School Administration* as well. All that is necessary to create such courses is a change in the character of the county educational office.

QUESTIONS FOR CLASS DISCUSSION

1. Show the connection between the rise of a professional school superintendent, and the decrease in size of school boards and the number of board committees.
2. Does the school board in your city divide functions between itself and the superintendent of schools in the way indicated as proper in this chapter? If not, why not?
3. Give three illustrations of matters of policy on which a school superintendent would want to confer with his board. Give three illustrations in which he would probably act independently.
4. Give an illustration of each to show your conception of the superintendent in his threefold capacity as organizer, administrator, and supervisor.
5. Should a superintendent feel aggrieved if his board does not agree with him in some major matter of policy, and refuses to approve his recommendation? Why? Illustrate.
6. If a superintendent in a smaller city has to be such a comprehensive type of man as is described on pages 115, 116, would you say that being superintendent in a smaller city is more difficult than in a larger city where the work is more specialized? Why?
7. Give reasons, drawn from your study of Chapter II, for the rapid increase in importance of the position of superintendent of schools in our cities, since about 1880.
8. How do you explain county school supervision having made so little educational progress, when it arose at about the same time as the city office?

9. What is the status of the state school superintendency as compared with city and county school administration?
10. Explain and illustrate what is meant by the statement that all else a superintendent may do is but getting ready to bring teachers and children together under the best possible conditions for instruction.
11. Why is a city school system in which the superintendent of schools is only a good average member of the teaching force likely to be an unprogressive system? Why may such a condition please certain types of communities better than to have a well-trained professional superintendent?
12. Why is good experience as an elementary school principal better preparation for a city school superintendency than the principalship of a high school?

EXERCISES AND PROBLEMS

1. Examine the *School Code* of your State, and list, in parallel columns, the legal powers of a board of education and the guaranteed powers of a city superintendent of schools.
2. Similarly examine the Rules and Regulations of some city board of education, to see how far they have delegated their legal authority to the superintendent of schools to act for them.
3. Make a drawing, similar in form to that of Figure 12, to show the form of educational organization in some city with which you are acquainted or for which you have data. If the resulting form of organization is not satisfactory, make a second drawing to show the desirable form of organization for the city to adopt.
4. If you can get the information anywhere, make an organization chart to show the form of administrative organization for some corporation, such as a telephone company, an electric light company, a railroad company, or a large department store. (See Thiesen, — title below — pages 83 and 86, for organization charts for the Pennsylvania Railroad Company and the New York Telephone Company.)

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CHAPTER VIII

THE WORK AND TRAINING OF THE TEACHER

Number of teachers employed. In addition to the superintendent and the principals, employed to organize and administer the schools and to supervise the instruction given in them, a large number of classroom teachers must be employed to do the actual work of instruction. With the growth of the Nation in population, the development of high schools, the organization of many kinds of special classes, and the extension of the compulsory school ages as well as the increasing compulsion to attend, the number of teachers required by our public schools has increased rapidly, as is shown by the adjoining table taken from the *Reports* of the United States Commissioner of Education. The numbers for 1925 and 1930 are estimated on the basis of the previous rate of growth, and are low rather than high.

TABLE I. NUMBER OF TEACHERS EMPLOYED IN THE UNITED STATES

YEAR	ELEMENTARY	SECONDARY	TOTAL
1890	360,802	9,120	369,922
1900	411,190	20,372	431,562
1910	491,043	41,667	532,710
1920	586,268	101,958	688,226
1925	633,880	132,104	765,980
1930	681,493	162,249	843,742

Of the total number employed, about forty per cent of the elementary-school teachers and about seventy-five per cent of the high-school teachers are in cities, under the supervision of a city superintendent of schools or a supervising principal, while the remainder are employed in village and rural schools and have but little supervision aside from what

district trustees and county superintendents can give. About ten per cent of all teachers employed are in high schools, and about one per cent are in kindergartens.

In addition to the above are the teachers in all special types of State schools, normal schools, and universities. To this total number of teachers in schools under public control — probably close to three quarters of a million in all — must be added the teachers in private and parochial elementary and high schools, and in business and vocational schools. These represent a little over two per cent of the total. If we add still further the teachers in the privately endowed and the denominational colleges and universities, together with school superintendents and supervising principals, close to eight hundred and fifty thousand men and women — about one in every one hundred and thirty-five of our population — are engaged in some form of classroom teaching or school administration and supervision. Truly this is a great army, engaged in a great service of replacement and development for the Nation.

This is the era of the teacher. So great has become the dependence of civilization upon the school that the present is often spoken of as the era of the teacher. Not only with us, but in all lands, governments are turning to education as the chief means for national progress, realizing that through the school society may be most easily moulded and directed. The social position accorded the teacher in consequence is higher to-day than ever before in history. Teachers, too, are better trained, better paid, and have greater influence than ever before. More too, is expected of the teacher in the way of personal qualities, teaching skill, and social service than used to be the case.

Though principals and superintendents may be over her, or him, the teacher in the classroom stands in her school and community as a representative of the State engaged in

carrying out a great State purpose. In many communities the teacher is the only person in the neighborhood who works in the name of the State. This gives to her activities no small importance, and in her life and work she is called upon to typify the best of a great and growing democracy. Her position is comparable with that of the priest under the old régime, and this fact gives teachers an opportunity for usefulness and service that many fail to appreciate. Now that the school has displaced the church in the central position of social influence, it to-day undertakes much of what once was the proper work of the church.

Social significance of the work. One of the great personal satisfactions that comes to teachers and school officers comes through a realization of the great political and social significance of what they are doing. With democracy the accepted form of modern government, and the absolute dependence of democracy on education, the teacher in the classroom renders a service indispensable to the life of the State and the Nation. In working through childhood for the improvement of communities, and the life and outlook and modes of thought of the people as a whole, the teacher is rendering a social service of great future importance. Seldom do communities realize how vital is the work done by the teacher, and seldom do teachers or school officers expect such recognition. The personal consciousness of the importance of his labor is the teacher's best reward. Like the ministry, teaching is in part a missionary service, and the real teacher expects to render this type of usefulness, finding in the practice of his art and the results attained ample compensation.

The children in our schools to-day are the citizens and home-makers of the future, and to prepare them for the responsibilities they must meet and carry is a task now resting very largely on the school teachers of this Nation. In

training our youths in the fundamentals of knowledge, in awakening in them tastes that are good and desirable, in training them for sound health and manly and womanly living, in placing ideals before them and stimulating worthy ambitions, in leading them to realize the importance of coöperation and service, in revealing to them the complexity of modern civilization and the importance of the part played by the individual in our national life, and in a dozen other useful ways the teacher works to build up the manhood and womanhood of the community and the citizenship of the State. In the sense of accomplishment through such service, conscientious and successful teachers find their largest personal reward. It is a work of such large social significance that few workers in other fields ever experience such opportunities for direct usefulness, or such keen feelings of personal satisfaction following successful accomplishment. In the highest sense of the words, teaching is a productive occupation. It furnishes new manhood and womanhood for the Nation. It is an exacting service, but many find in it the richest and most satisfying values that come to one in life.

The teacher works with youth. One of the charms of teaching, and it has many charms, is the daily contact with eager youth, full of the interests, the hopes, the aspirations, and the enthusiasms of early life. To help shape and direct these interests, and hopes, and aspirations, and enthusiasms is one of the great privileges of the teacher. It is not to be wondered at, then, that good teachers find their greatest satisfactions in the schoolroom, or that they stay young in spirit as they grow old in years by reason of their contact with the contagious interests and enthusiasms of youth. The children of the early grades are very responsive to suggestions and follow teacher leadership well. In the early adolescent years they are idealistic to a high degree, and are

easily set afire with enthusiasm for good things. In the high school the call is individual and personal, and the task of the teacher is to reveal the pupil to himself and fix his purposes. These are opportunities which the real teacher welcomes and turns to good account.

The work of the schoolroom also brings new and varying contacts with youth which mean much to the real teacher. The changing classes bring new pupils and new problems of interest to the teacher who keeps young with her work. In the primary grades the development of will power on the part of the pupils, through interest in what the teacher leads them to do, is perhaps the teacher's greatest service. In the grammar grades, where set tasks must be carried through, the teacher finds both pleasure and satisfaction in brightening up desirable interests and in weighting down undesirable tendencies in the work of instruction. These years, too, offer perhaps the greatest of all opportunities of the school for the development of the social and moral personality and the guidance of youth. In the high-school influence must be much more personal and individual, and in opening up to youths their undiscovered, longed-for self, and in the formation of tentative plans for the journey of life, many teachers find their largest personal opportunities and satisfactions. All through the work of the school the opportunities for wholesome and helpful contacts with youth are always greater than even the best of teachers can utilize.

Teaching is interesting work. Everywhere throughout the work of the school new problems are continually presented to the teacher whose eyes are trained to see them. The adaptation of instruction to pupil and class needs in itself requires much teaching skill. The location of causes for errors and failures leads to ability in the diagnosis of difficulties and the planning of remedial procedures, and the acquirement of such skill adds much to the interest of teach-

ing. The gradual mastery of good "teaching technique" is in itself an interesting process. To be able to organize a subject independently of the text, to keep the class interested but under proper control, to raise the right questions in the right order, and to carry the class thinking along to the proper conclusions — these call for a type of skill that gives a consciousness of strength and makes many teachers feel that teaching, by good modern methods, is one of the greatest things in the world.

Though a teacher may spend her entire life in a grade or a single phase of the teaching work, the service need never become dull and monotonous routine or a largely mechanical process on the part of the teacher. The human materials passing continually through the teacher's hands vary so greatly in possibilities and capacities, and the subject-matter can be so greatly diversified in both content and form, that a teacher deeply interested in her work need never lose her enthusiasm. While it must be admitted that many do, on the other hand it must be remembered that many do not. Some of the most contented people in the world to-day are to be found among the teachers in our public schools.

Such service requires accumulated capital. To do good teaching and to find large personal satisfaction in the teaching service, call for much accumulated capital in the form of knowledge and technical skill. Teachers who teach continually up to the limits of what they know are never very successful or happy in what they do, nor do they usually make any deep impress on their pupils. One must know more than one is expected to teach, must have broader outlook and vision than those one would lead, must possess the comforting consciousness of mastery of the subject, and must be able to invigorate the bare bones of the text or the work of the course of study by making it live and grow through a forceful personality. Stated another way, one must over-

run the mere necessities of one's calling and know more than the calling seems to require. The teacher must have large accumulated capital in the form of knowledge, professional preparation, good health, strong personality, life experience, and social understanding to be able to succeed in a large way, and hence to find in teaching one of the most enduring satisfactions in life.

The main reason why so many young people who turn to teaching do not succeed, at least in any large way and are never very happy in the teaching service, is that they have no such accumulated capital. Either they have not taken time to get ready, lack the energy and enthusiasm that come from sound health, or are wanting in the essential personal qualities for successful service. One must prepare thoroughly for what one proposes to do, must by attitudes and personality be adapted to the teaching service, must keep in touch with the world about one, must be strong and well, and must continually accumulate knowledge and insight and vision and good humor, holding these in reserve to be poured out as needed for the supreme object of the teacher's work. Every occupation and every form of professional service rewards most generously those who best prepare themselves for it, and who take most seriously the responsibilities of the work in which they would engage.

Let us examine a little further each of the six important qualifications mentioned above.

Preparation in knowledge. How much preparation in actual knowledge one should possess to enter the teaching profession will be determined in part by just what place in the service one desires to occupy. The minimum educational preparation for any form of the teaching service should be a good high-school education, plus two years of professional training. That thousands of teachers have had less than this does not alter the fundamental principle that this

should be the minimum preparation, even for village or rural teaching. In the larger towns and in the cities this minimum professional preparation is now almost everywhere required. For teaching in the high school, four years of college work beyond high school is now generally regarded as the minimum preparation, and this much is now required by most high-school boards. Some professional courses are usually required to be included as a part of the college course, but in a few States added professional study is also expected. For special forms of the teaching service — kindergartens, manual arts, household arts, music, drawing, and special types of class work — the minimum of a high-school education and at least two years of special preparation are expected generally. For some forms of special-class work, such as the instruction of atypical children, a full college course with emphasis on education and psychology, in addition to some teaching experience, is usually demanded. The junior high-school teaching positions and the elementary-school principalships also are increasingly being given to those who have had college training. The larger administrative positions in the school system, excepting always the county superintendency in those States where the office is still elective, also are more and more being reserved for those who, following a college education and some teaching experience, have made special and advanced professional preparation in some school or college of education.

It is not likely to be overemphasized that for teaching, in any field, one needs good sound knowledge. The exact nature of the general education is perhaps less important than that it should be good, and that it should challenge the best efforts of the student, awaken worthy ambitions, and stimulate the development of a high ideal for some form of professional service. The preparation for teaching should be broad rather than narrow, and should open up to the

student permanent interests in history, literature, science, industry, government, human welfare, music, and art. These the future teacher needs for breadth of culture and understanding of life's problems. During this period one should buy standard texts on the fields covered, study them and mark them, and keep them as the nucleus of a personal professional library. Books are to a teacher what instruments are to a surgeon or tools to a carpenter, and the accumulation of a well-selected working library should be one of the ambitions of every teacher.

Professional preparation. Following the high-school work, and along with normal school or college work, the prospective teacher needs to make satisfactory professional preparation. In the two-year normal school professional subjects often constitute the bulk of the instruction, but in the college or teachers college the professional work is carried alongside of much additional subject-matter instruction. This latter includes much that is intended to broaden the knowledge and outlook of the teacher, such as English, history, geography, and science, with a view to focusing the instruction on the work and needs of the school. It also embraces new fundamental subjects, such as biology, psychology, sociology, and economics, given to lay firm foundations for later professional subjects.

On the professional side the student is given demonstration and practice teaching, and studies such professional subjects as methods of instruction, classroom organization and control, psychology and applied psychology, child hygiene, elementary education, educational measurements, the history of education, educational sociology, and rural education. Often the professional work begins with a general introductory course, such as is covered by the contents of this book, the purpose being to present to the prospective teacher the different fields of the subject of education, much

as is commonly done in science and history and literature, before beginning the study of specialized phases of the general subject. The student preparing for junior high-school teaching usually includes studies on the nature and work and aims and purposes of these institutions. A course on the organization and administration and supervision of a school is often included, to prepare students to assume positions as school principals.

Those preparing for administrative work as principals, special supervisors, or city superintendents of schools — in most cases students in colleges of education who have first secured some actual teaching experience — study in addition such subjects as public school administration, school legislation, the supervision of instruction, curriculum construction, school surveys, school finance, educational statistical procedures, principles of education, and educational problems.

Rapid development of the subject of Education. Few subjects of study have developed more rapidly, during the past quarter-century, than has the professional subject of education. Consisting very largely, twenty-five years ago, of psychology, methods, management, child study, and a poor type of history of education, the work in education has been completely made over and greatly expanded in scope in the intervening years. Entirely new subjects of instruction in education have been developed, entirely new schoolroom procedures have been applied, and the professional subject of Pedagogy of three decades ago has been expanded into the large and important field of Education of to-day. How great has been the transformation few new teachers of to-day, unless they have studied the history of this development, are able to realize. Teachers and principals and superintendents alike, especially during the past decade, have found it necessary to study the new subjects under

competent instruction to keep in touch with the rapid progress being made in their profession.

The result has been witnessed in the rapid expansion of small departments of education into important schools and colleges of education, the growth of the two-year normal school into the four-year teachers college, and a most remarkable development of summer school instruction for teachers in service throughout the entire United States. So important have been these recent developments, and so necessary is a knowledge of the new procedures for successful modern teaching, that many school boards to-day grant extra pay to superintendents, principals, and teachers who attend summer schools, or take leaves of absence to obtain training in the new subjects of study and the new educational procedures. To-day, given equal native ability and energy, those who make the largest investment in time and money and effort in preparation for the teaching service are those who are certain to reap the largest personal satisfaction and the greatest financial rewards.

Good health as an asset. From both the individual and the social point of view, no phase of the preparation for the teaching service is more vital than that of the teacher's health. A buoyant spirit is nearly always the product of good health, while a physically incapacitated teacher is not likely to bring to the classroom that happiness of attitude and physical vitality that have such an important influence on the life and outlook of young people. On the other hand, many of the troubles of the school — poor discipline, inattention, lack of interest in the work, and want of sympathy between teachers and pupils — are directly traceable to the defective physical condition of the teacher.

The teacher in the schoolroom who is not physically strong and well runs many risks. She is subject to contagion, unsanitary conditions bear heavily upon her, the

work becomes trying and nerve-racking, and the teaching load slowly wears her out. Discipline becomes harder, and this in turn places an added drain on her physical and mental resources. It becomes more and more difficult to make the needed social contacts, or to maintain the desired social understanding. "Teacher weariness" is apparent to all, and unnecessary worry in time takes a heavy toll.

So important is the health problem to the teacher and to the school, and so important to the pupils is the teacher's instruction in health, that good health becomes one of the most important qualifications of the teacher. Teacher-training schools owe it to the profession to institute physical examinations as part of the requirements for entrance, to offer the best of health conditions, to provide instruction and supervision in health while the teachers are in training, and to try to establish a personal health-program with every teacher under their charge. This is often difficult of accomplishment because those in training, especially girls, will not give the school the needed coöperation. Late hours, neglect of sound dietary principles, faulty personal habits, failure to take proper precautions and to observe sound rules of health, eye-strain, lack of proper exercise, and failure to establish good physical habits — these make far deeper inroads with intellectual workers than with those who work with their hands. The commonly noted tendency of teachers to be erratic and queer often is but the natural result of poor mental and physical health. A sound mind in a sound body is a worth-while ideal for any one who would be a teacher, and is slowly being made a prerequisite for entry into the teaching service by many school systems.

The importance of personality. In teaching, as in medicine, law, and many forms of business, personality also is a very important item in the equipment for success. There are some persons of such inferior personality that they

ought not to try to teach. Those who are heavy, impassive, crude, small-souled, mean, insincere, cowardly, untruthful, unfair, egotistical, blasé, or sadly afflicted with what is often spoken of as an "inferiority complex," are not likely to succeed as teachers anywhere, and least of all where they come in contact with older pupils. Teaching calls for just the opposite of these qualities — for sympathy, sincerity, naturalness, good breeding, a sense of justice, courage, devotion, idealism, and a firm belief in the very great importance of what one is trying to do. So vital are the personal qualities that a prominent executive has recently declared that, in all his experience, he has never known a success in teaching that could be accounted for on scholarship and professional training alone, or a failure that could not be attributed to other grounds. Some teachers are popular, successful, and wanted by all who know them, while others, equally well educated and trained and experienced, are failures and wanted nowhere. The one word which covers these differences is *personality*.

It is an accepted fact that personality is largely a matter of birth and early training. By the time we arrive at maturity we have been given, by nature and by nurture, a very definite cast, and one that is not easily changed. Some young people are as a result good-natured, warm-hearted, generous, altruistic in outlook, possess a wonderful ability to take pains, and seem endowed with a genius for aiding and helping and guiding others. It is from this class that the so-called "born teachers" are drawn.

There are not enough of these "born teachers" to meet our needs, however, and an additional supply has to be created. We know that personality, after all, is something that can be cultivated and developed. We can study ourselves, strengthen our weak points, and improve the desirable qualities that our birth and early training have

established. Much of the subjects of classroom management and teaching technique aim to do just this. We can also study to improve our manner and manners, our walk and posture, and our ease of approach and control. Neatness in dress, and a good enunciation and voice can be made habitual by proper training. The qualities of sympathy, sincerity, loyalty, courage, and leadership are all capable of development by proper exercise and training.

In addition to what we may learn from specific professional training, and what we may do to improve our voices and carriage and manner and other personal qualities by careful attention and drill, every teacher should strive to develop certain other personal qualities and characteristics. He, or she, should study how to take into his or her life and enjoy many simple pleasures, and be happy in consequence; how to shed anxiety and worry; how to see the larger ends beyond the daily task, and thus lift it from the level of drudgery; how to live a well-balanced life; and how to keep ever before one a clear ideal of service. These are all strong aids in the development of that teaching personality which will enable one to become an effective, happy, and successful teacher. Any teacher who can cultivate these personal qualities can scarcely help being successful, or the teacher who neglects them a failure.

Life experiences. Some teachers, otherwise well qualified, never attain their largest possibilities for success because of a lack of needed contacts with the life of the world about them. For one reason or another they have lived too limited a life. It is here that the "home girl" teacher often fails of the larger success, unless she goes away from home to supplement her training. Contact with new and different people, and new and different surroundings, is an essential part of one's education. Other things being equal, the home normal school is not so good as the normal school away from

home, or the person who has never traveled as the one who has traveled much.

In a world so complex and so difficult of understanding as the one in which we now live, a world of science and industry and commerce and human beings, life experiences are of large importance to those who would train and guide the youth in our schools. Other things being equal, the broader the life experiences of the teacher the larger ought to be her usefulness in the schools.

Social understanding. The last of the six forms of accumulated capital we stated (page 133) the teacher needs for successful work is that form commonly known as *social understanding*. Teaching is, to a certain extent, the highest form of human welfare work. It aims to make independent and dependable human beings, and to fit them for intelligent living in a complex and difficult world. This cannot be done without some knowledge as to community problems and life needs. We call such knowledge social understanding. To try to give such knowledge to prospective teachers we are transforming the study of history to make it deal more with the problems of human welfare; a new group of "social studies" has recently been developed; the history of education has been rewritten so as to interpret to teachers our educational problems in the light of their development as problems of social welfare; social and citizenship studies have been organized into book form for use in teacher-training institutions; and the new studies of rural sociology and educational sociology have been worked out and are now taught. The social activities of the high school and the normal school have also been given a prominence in recent years that previously was unknown. All these are aimed to give to the prospective teacher some intelligent understanding of the complex social and political organization which we know as our national life.

There is another aspect of the problem of social understanding that is also of much importance to the teacher, and still more so to the prospective principal or superintendent of schools. This is the ability to mix with and get along well with people. Social understanding, human understanding, and favorable personal qualities are all called for. This "gift of the people" is a desirable addition to the other qualities of personality for a teacher, and an almost indispensable quality for the principal or the superintendent of schools. It cannot—for long—take the place of the more substantial qualities of scholarship and training, but it is a very important addition to such qualities.

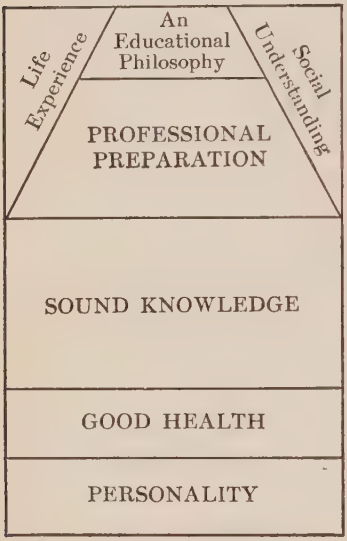

FIG. 13. THE EQUIPMENT OF A TEACHER

The six forms of accumulated capital we have mentioned — sound knowledge, professional preparation, good health, good personality, life experience, and social understanding — form what may well be regarded as the foundation equipment for a teacher. Possessed of these six he or she is almost sure to succeed, and in a large and self-satisfying way.

Why some teachers fail. So much as to the work and training of a teacher, and the elements that enter into teaching success. Before closing this chapter, we may well turn the problem around and ask what are the chief causes of

teacher-failure. A number of studies of this question have been made, and these show but little difference in the causes for failure among elementary- and high-school teachers. The essential reasons are much the same in the case of each. Weakness in discipline, poor instruction, deficiencies in scholarship, lack of personality, and faulty instructional methods head the list. Following these causes come lack of interest in teaching, insufficient daily preparation, want of sympathy with children, and need of good judgment. Poor health and nervousness follow closely here. Then come deficiency in social understanding, lack of personal culture, unprofessional attitudes, and inability to coöperate with others. Immorality, disloyalty, and frivolous conduct come near the bottom of the list.

The importance of adequate scholarship, good professional preparation, personality, proper professional attitudes, good judgment, sound physical condition, and social understanding is evident from these studies. Enrolling in a profession to which one does not by nature belong, failure to make the necessary preparation, neglect to become a student of children and books, lack of interest in the work, weakness in personality — these are the chief causes for teaching failure to-day.

The importance of an ideal. The school preparation should give not only knowledge and training, but it ought also to awaken an ideal for service and reveal to the student the real pleasure of hard work to bring about the realization of that ideal. Every teacher should, early in life, become devoted to an ideal. Devotion to an ideal serves to diminish discouragements and to transform what would otherwise be the drudgery of the school into a labor of love. Every worker needs to be buoyed up by ideals and enthusiasms that will give one the ability to meet and deal with the problems of life.

Every teacher should, early in life, formulate for himself or herself some philosophy of the educational process, to be able to see ends among means and distant goals amid daily schoolroom procedures. One must see in the educational process the chief means for the improvement of the race, and must believe in the power of education to influence childhood and youth toward a better and more useful life. Such a clear conception of the educational process tends to develop power and to give one new inspiration, as well as to create enthusiasm of both heart and mind. Unless the beginning teacher becomes fired with some such conception of the importance of education for the race, and devoted to the ideal of service, the profession is not likely to be greatly enriched by her presence or many lives to be made better and nobler because of her having lived and worked. The highways of the teaching profession are everywhere lighted by the lamps of devotion and sacrifice, and the true teacher is as much a dedicated spirit as any poet — he is a teacher because all the better elements of his nature compel him to teach.

Teaching not easy work. While teaching is very interesting work, to those adapted to it and who have made proper preparation for the service, it is not easy work. It is a work calling primarily for service, and service to others is something that makes heavy demands on one's energy and even on one's vitality, if one is not strong and well. It is a service, too, that calls for continuous preparation to keep abreast of the very rapid progress now being made.

It is, on the other hand, the opportunity of those who are by nature studiously inclined. In almost no other profession can one have such continuous opportunities for a life of regulated work and personal advancement. The hours are definite, and the vacations long and regular. The best of books and teachers are easily had, and usually books may be obtained without cost. Good lectures, too, are provided

free for the teacher. One has the stimulus, too, of many others engaged in the same work, and often the aid of many who can be of assistance and who give their help freely. If one can keep free from the political agitation and consequent discontent to which some groups of city elementary teachers have recently seemed to be subject, teaching offers opportunities for a happy and a studious life such as is offered in almost no other type of professional service. Many successful teachers are to-day so happy and contented in their work that they feel about it much as Professor Palmer once said of his work — "that Harvard University pays me for doing what I would gladly pay it for allowing me to do." All over our Nation thousands of men and women may be found who teach in our public schools with much the same enjoyment, and who follow the calling with a devotion that takes little account of the somewhat meager income received.

The scope of this chapter. In this chapter we have pointed out the great social importance of the work of the teacher, and the kind of preparation required for success in the service. We have also indicated the personal characteristics that lead to success or failure. This is information which every beginning teacher needs to know, and which many normal schools, teachers colleges, and vocational guidance bureaus try to give to those who would prepare for the work.

Sometimes a separate short course on *Problems of the Teaching Profession* is given covering this, and more; often the same information is brought in as a part of a course in *Teaching Practice;* and still more often it comes as a part of such a course as this book aims to present, under the title of *An Introduction to the Study of Education* or *An Introduction to Teaching.* There are many good articles and brief books covering what is here presented, and which the prospective teacher may read with both pleasure and profit.

QUESTIONS FOR CLASS DISCUSSION

1. Show the growing importance of the work of the teacher, as increased political functions are given to the electorate.
2. Explain why it is natural that citizens and parents should not appreciate the full importance of the work of the teacher or school officer.
3. What evidence can you cite that the younger generation understands, better than the older one, the importance of the work of the school?
4. Show the need for different methods of instruction with pupils in the elementary, junior high-school, and senior high-school years, based on their different interests and attitudes and stage of development.
5. Show how interest in the teaching process tends to prevent continuous teaching in the same grade or type of work from becoming "dull and monotonous routine."
6. Show, from a number of occupations, that the largest personal satisfactions and monetary rewards come to those who prepare themselves best for the work they are to do.
7. Show how English, history, geography, and science might be studied in a normal school or teachers college from quite a different point of view than in a cultural college or university.
8. Show the foundational importance for later professional study of such subjects as biology, psychology, and sociology.
9. Bagley, in his volume on *School Discipline*, gives a composite judgment of one hundred experienced school men on the elements entering into "teaching personality," as follows:

1. Sympathy	6. Enthusiasm
2. Personal appearance	7. Scholarship
3. Address	8. Physical vitality
4. Sincerity	9. Fairness
5. Optimism	10. Reserve or dignity

   Are these, one by one, personably improvable qualities? What could the teacher-training school do for each?
10. Show that the increasing education and professional training required of teachers has barely kept pace with the increasing complexity of and advances in our national life.
11. Teachers were once apprenticed, and trained in that way; show why this method broke down, and could not be made to serve today.
12. Discuss the statement that the teachers in our schools can make the future what they please. Apply this idea to industrial understanding, world peace, better government, personal hygiene, health, moral worth, and national integrity.

EXERCISES AND PROBLEMS

1. On a scale of ten, rank teaching in comparison with other professions — engineering, medicine, law, the ministry, journalism, banking, business management, architecture — under the headings of training needed, salary, tenure, time to achieve success, number of failures, promotion, character of the work, pleasantness of associations, public confidence, self-expression, opportunity for service, usefulness of service rendered. Calculate the average of the rankings, and locate the position of the teaching profession. On the basis of your findings, what reasons have led you, or would lead you, to become a teacher?
2. What would be the effect on the teaching profession if the colleges of the United States were to present clearly, to their better students, the unrivaled opportunities for self-expression and social service which the career of the teacher affords?
3. A bill is proposed in the legislature to require that all teachers in the State, after four years from date, shall have been graduated from a four-year high school and had at least two years of professional training in a normal school or teachers college. The representative from your district has indicated that he would like to receive an opinion, *pro* or *con*, from those interested. Write a short letter (two pages) to him, giving your reasons why you hope he will favor (or oppose) the passage of the bill.

COLLATERAL READING

*Almack, J. C., and Lang, A. R. *Problems of the Teaching Profession.* (335 pp.) Especially chaps I, II, IX, and XV.
*Bagley, W. C., and Keith, J. A. H. *An Introduction to Teaching*, chaps. I and XI.
Horne, H. H. *The Teacher as Artist.* (63 pp.)
*Hyde, Wm. DeWitt. *The Teacher's Philosophy.* (88 pp.)
Kandel, I. L. *Ed. Twenty-Five Years of American Education.* (467 pp.)
*Palmer, G. H. *The Ideal Teacher.* (32 pp.)
Perry, A. C. *The Status of the Teacher*, part III.
*Sears, J. B. *Classroom Organization and Control*, part IV.
*Strayer, G. D., and Englehardt, N. H. *The Classroom Teacher*, chap. III.
Strayer, G. D., and Norsworthy, N. *How to Teach*, chap. I.
*Terman, L. M. *The Teacher's Health.* (137 pp.)
Woodley, O. I., and M. V. *The Profession of Teaching*, chap. I.

Interesting books describing the work of a teacher:
Field, Jessie. *The Corn Lady.* A. Flanagan Co., 1911.
Martin, G. M. *Emmy Lou.* Grosset & Dunlap, 1902.

Patri, Angelo. *A Schoolmaster of the Great City.* Macmillan, 1917.
Quick, Herbert. *The Brown Mouse.* Bobbs-Merrill Co., 1915.
Smith, W. M. *The Evolution of Dodd.* Rand McNally Co., 1883.
Wiggin, Kate D. *Rebecca of Sunnybrook Farm.* Houghton Mifflin Co., 1903.
Wray, Angelina. *Jean Mitchell's School.* Public School Publishing Co., 1909.

All the above are quite interesting reading, no one is long, and each reveals something of the work and problems of the teacher in a public school.

CHAPTER IX

A PHILOSOPHY OF THE EDUCATIONAL PROCESS

Need for a guiding philosophy. Every successful undertaking is carried on in the light of some guiding theory or philosophy. A business is conducted to make money by providing goods for sale that people want to buy; a manufactory to make and offer a standard product; a railroad to sell good transportation service; a bank to help build up the country by a wise extension of credit; a Y.W.C.A. to provide homelike Christian surroundings for girls; a vice-prevention society to advance the public welfare through the suppression of vice; and an organization of Bolsheviki to hasten the coming of the millennium by abolishing capitalistic government and the rule of the intelligent. In the conduct of each such organization the management works according to a guiding philosophy that outlines its purposes, sets goals, limits the sphere of action, and determines the methods and processes to be employed. The management, too, tries to give to each working member of the organization as clear a conception of these aims and purposes and goals as is possible, and to create in each a somewhat similar theory as to purposes and service. Many workers, under present industrial conditions, fail to develop such a working spirit, but if one's work anywhere or in anything is to be more than mere day labor, one needs some goal or guiding principle toward which one more or less consciously directs his daily efforts. As individuals, too, wholly aside from our work, we each of us have some kind of a philosophy of life and some personal measure of the successes to which we may attain.

Education of even a personal kind would have but little meaning without a sound guiding philosophy, while a State-supported system of public instruction would be purposeless without such. In few types of service, too, is it so important that every worker be possessed of a personal philosophy of the process that is in harmony with the best philosophy for the school. The lack of such a clear and illuminating guide of the educational process may be set down as one of the reasons for the failure to attain success on the part of many teachers. Such a guiding philosophy is largely the outcome of sound knowledge and good professional preparation.

Every teacher should, then, early in his or her teaching career, formulate for himself or herself a clear guiding philosophy of the educative process. The place and time for this is during the training period and the earlier years of teaching service. In such courses as the *History of Education*, *Theory of Education*, and *Principles of Education* one studies the educational problem and formulates a working educational philosophy for one's self. In such courses the student learns to grasp intelligently the conception that education is based on the idea of the improvability of the race, and that the teacher stands as the agent of civilization to try to effect such improvement and advancement. The very great importance, too, of State systems of public instruction in such a form of government as ours comes out plainly, and the prospective teacher gradually comes to see that no other class of workers has so much to do with determining the future of our Nation as do the teachers in our public schools. The history of education is the history of the advancing civilization of our race in one of its highest forms; the theory of the school and of the educational process has repeatedly changed as progress has been made. Still more, the best theory of the educational process is always in advance of the popular conception of the place and

work of the school. There is always a "lag" between theory and practice. This gives to the work of teaching and managing schools a potential importance that we can hardly expect the ordinary citizen, who has not given thought to the question, to appreciate.

Our philosophy of education an evolution. The philosophy of the educational process, as we have it in its best expression to-day, has been a matter of evolution, and the change is as yet by no means complete. During the past half-century the changes have been so rapid that almost every decade has seen the evolution of new points of view. In consequence there are many teachers in our schools to-day whose work is guided by an outworn educational philosophy. Still more, one finds here and there both entire school systems and teacher-training institutions which are being conducted in accordance with a working philosophy that has been outgrown and discarded by progressive workers elsewhere. That teachers, and at times whole school systems, may work in accordance with an outgrown educational philosophy and hence along wrong lines, and often without the public knowing the difference, only increases the responsibility of the school and the importance of a sound guiding philosophy of the educative process for every worker in the educational organization.

Some of the broader outlines of the evolution of our philosophy of the educative process, and a statement of what to-day represents our best thought as to the work of the school, should be of service to every beginning student of education, and to a presentation of this we shall devote the remainder of this chapter.

Rise of a State theory of the school. Up to near the close of the eighteenth century generally, and still later in some lands, the school of the people was commonly regarded as an institution of the Church, and its maintenance was

primarily for religious ends. Like baptism, confirmation, marriage, the sacrament, the remission of sins, and the burial of the dead, the education of youth was considered as one of the duties and offices of the Church. The purpose was to lead to church membership and to salvation, and this purpose colored the entire work of the school. Only here and there in German lands, among the Dutch, in the New England Colonies, and a few places elsewhere had any different conception as to the purpose of the school been evolved. Reading to be able to read the Bible, a little counting and writing, in Teutonic lands a little music to prepare for the church services, and careful instruction in a religious Primer, the Catechism, and the Bible constituted the subject-matter of the school of the people. The Latin schools existed for the few, and largely to prepare for service either with the Church or the State. In the common schools one learned to read largely that one might come to know the will of the Heavenly Father and be saved; in the Latin School one studied to become a scholar and a leader in the ecclesiastical or the political world. The religious theory thus dominated the work of the school.

During the mid-eighteenth century a number of French writers did much to create a new State theory for the school, and this State theory the new American States embraced in their early constitutions and laws. Though a number of writers contributed to the change, the one book that did more than any other to sap the foundations of the old religious theory of education was the *Émile* (1762) of a French-Swiss by the name of Rousseau (1712–78). In describing what he conceived to be the proper education of a boy he contributed much to changing, in popular thinking, the point of view in instruction from subject-matter to the child to be taught, and from formal religious doctrine, preparatory for life hereafter, to the study of the life and in-

stitutions amid which man lives here. Inspired by Rousseau's writings, the German-Swiss Pestalozzi (1746–1827), after half a century of experimental teaching, early in the nineteenth century laid the foundations of the modern elementary school. Rejecting the teaching of the Catechism and mere words and facts, he gradually came to conceive of the educational process as based on the natural and orderly development of the instincts, capacities, and powers of the growing child. As he expressed it, he "tried to organize and psychologize the educational process" by harmonizing it with what Rousseau had pointed out to be the lines of natural development of the child.

This was a revolution in thinking. It gave an entirely new direction to the school, formulated a new educational philosophy for it, and in time completely made over the instruction in the elementary school. Coinciding with the American and French revolutions, with their new political theories as to the rights of man and the functions of government, Pestalozzi prepared the way for the adoption of the school as an instrument of the State, to serve the ends of citizenship. The nineteenth century saw this accomplished, and the school transformed from an instrument of the Church to the most important constructive tool of the modern State. An entirely new philosophy of the educational process was evolved, citizens displaced the priest in the control of education, and teachers educated and trained by the State displaced nuns as the instructors of youth.

The knowledge-as-power conception. It was but natural, with the rise of democratic government and State school systems, that we should at first have conceived of knowledge as power, and as almost certain to lead to virtue. The new State school was erected to promote literacy and citizenship, and this was to be done by insuring to the people the elements of learning, thus preparing them for participation in

the functions of government. There was, too, an early unexpressed assumption that children were alike in needs and capacities, and that the training they needed for citizenship and for life consisted in their acquiring certain book-knowledge which it was the business of the school to impart. Early taking deep root with our people, the knowledge aim for a long time everywhere dominated our school instruction.

As our school systems were developed and the school instruction was expanded, courses of instruction came in time to be quite minutely outlined; the particular work for each grade came to be quite definitely laid down; the kind, amount, and order of the subject-matter to be learned by all pupils, regardless of age, past experiences, future prospects, or physical or mental condition, was uniformly prescribed; and the examination test at the end of the term became the almost uniform proof that what had been outlined had or had not been mastered. A prime business of the school came to be to pass on to the next generation the accumulated knowledge of the past. Fact knowledge was regarded as of greatest importance. Oral reading, spelling, arithmetic, geography, and history became the important subjects of the elementary school. In the secondary school, too, the courses were limited in scope, bookish in nature, and uniform for all. A slavish dependence on the textbooks used was a marked feature of all instruction, and the courses not infrequently were outlined merely in terms of pages to be covered. One still finds such schools and courses here and there to-day, though their number has greatly diminished in recent years.

The disciplinary conception of education. Closely allied with the knowledge conception of education was a psychological belief in the great value of mental discipline and drill. It was held that by the use of selected subject-matter, psychologically organized and presented by the teacher and

properly drilled in, teachers would be able to train the attention, memory, will, imagination, feelings, judgment, reasoning ability, and other "powers of the mind" of their pupils. This, it was believed, would prepare them well for life, awaken the egoistic and social feelings, stimulate the higher sentiments, develop moral character, and realize the citizenship aim of education. Imparting information, drilling for mastery, and controlling the school were the work of the teacher; supervision consisted largely in testing the pupils to see that the teaching had been well done. The administration of such courses of study became the running of a machine.

The disciplinary conception of the educative process was based on a now-abandoned psychology known as a "faculty psychology." This older psychology conceived of the mind as a group of separate faculties — as memory, judgment, will, etc. — each of which could be trained through exercise. To give such exercise was the work of the schools. Studies were taken up and mastered that the mind of the pupil might be "disciplined" to do other pieces of work later on. It was assumed that training in one kind of work would "carry over" to another. Some of our school subjects still owe their position in the school in part to this earlier belief in their disciplinary value. While it is believed to-day that one may so teach that there will be more "transfer of training" than was thought possible two decades ago, the transfer in any case we now know to be small. The mind is not constructed on a plan that makes large disciplinary transfer possible.

Education as development. An entirely different conception as to the nature of child development and the purpose of education appears when we turn from these older theories to the more recent conception of education as the process of developing the inborn capacities of children.

Under this conception each child is regarded as a bundle of possibilities to be developed, or repressed, and not as a reservoir to be filled. From this point of view, facts are of importance only when put to use. Knowledge is now conceived of as life experience and inner conviction, and not as the memorization of the accumulated knowledge of the past — as a tool to do something with, and not as a finished product in itself. The whole conception of the school is, in consequence, changed from a place where children prepare for life, by learning certain traditional things, to a place where children are daily brought in contact with such real life experiences as will best prepare them for the larger problems of life that lie just ahead. The real educational problem, then, is the children in the community who present themselves for education, and not the more or less traditional subject-matter which the textbooks contain.

Principals and teachers in a school system working according to such a philosophy of education naturally occupy quite different positions from those of principals and teachers in school systems following the older philosophies of the educational process. Instead of being drill-masters, they stand as stimuli to pupil activities. Teachers now propose problems, and guide the pupils in thinking and studying them through. They are friendly critics by whose help young people may learn to think clearly and to reason more accurately. The purpose of instruction is changed from the memorization of facts to that of fitting pupils for personal responsibilities; from that of accumulating information to that of training young people to stand on their own feet; from that of transmitting to them the inherited knowledge of the past to that of preparing them for social efficiency in the life of to-morrow.

New purposes in instruction. Mere drill is now in large part replaced by lessons involving appreciation and ex-

pression; problems that prepare for efficient participation in the work of democratic government are emphasized, and training in solving them is given; pupil-coöperation schemes for training in self-control are utilized; and the social relationships of the classroom and the school are directed toward the preparation of socially efficient men and women. The teacher's main duty becomes that of guiding and directing the normal processes of thought and action on the part of the pupils, of extending their appreciation into new directions, of widening the horizon of their ambitions, and of stimulating the development of larger and better ideals for life and service. The school actuated by this type of an educational philosophy becomes a new institution.

The most marked change from the knowledge and disciplinary type of school is the shifting of the center of gravity from that of the subject-matter of instruction to that of the child to be taught. The aim now is not mere knowledge, except as knowledge will be useful; not mental discipline of the drill sort, but a discipline of the whole life; not a head full of facts, but a head full of ideas; not rules of conduct learned, but the learned ability to conduct one's self properly; not a pupil knowing civics, but one who can think over civic questions; and not so much a learned as a well-trained output.

Through community civics, studies in science and industry, studies of community life, the study of health problems, accident prevention, studies of home needs, domestic-science instruction, manual training, drawing, music, thrift training, manners and conduct, plays and games, and social control, as well as through a reorganization and redirection of the work in the older school subjects, the best schools of to-day aim to prepare their pupils for greater social usefulness and to give them a more intelligent grasp of the social and industrial, as well as the moral and civic, structure of our modern democratic life.

The social-and-civic-usefulness conception. One great purpose in the introduction of these new studies has been an attempt to interpret to the young people of to-day the changes in life which the industrial and social revolutions of the nineteenth century have produced. During the past half-century the school has been transformed from a disciplinary institution, where drill in mastering the rudiments of knowledge was given, into an instrument of democracy calculated to train young people for intelligent living in the complex and difficult world in which they now find themselves. The school of to-day aims to interpret modern life by reducing it to such terms as children can understand, to introduce them to it through simplified experiences, to train young people for useful service in office and shop and home, and to give them some preparation for political life through participation in simple forms of governmental organization.

The foremost American interpreter, in terms of the school, of the vast social and industrial changes which have taken place, has been John Dewey (born, 1859). Better than any one else he has thought out and stated a new educational philosophy, suited to the changed and changing conditions of modern living. His work has tended both to re-psychologize and to socialize education, as well as to give it a practical content along scientific and industrial lines. He has tried, by connecting the activities of the school with those of real life, to give the child some intelligent understanding of the new world in which he is to live. Social efficiency, and not mere knowledge, he has conceived to be the aim of the school, and this social efficiency must come through participation in the activities of an institution of society, the school.

The school, then, is a place where children are working rather than listening, learning life by living life, and be-

coming acquainted with social institutions and industrial processes by studying them. The virtues of the modern school, as Dewey points out, are learning by doing; the use of muscles, sight, and feeling, as well as hearing; and the employment of energy, originality, and initiative. The virtues of the school of the past were too much the colorless negative qualities of obedience, docility, and submission. These are but a poor preparation for social and industrial efficiency, or for democratic life and government. Responsibility for good government, under any democratic form of organization, rests with all, and the school should give preparation for the political life of to-morrow by training its pupils to meet responsibilities, developing initiative, awakening social insight, and causing each to shoulder a fair share of the work of government in the school. That "the school cannot be a preparation for social life except as it reproduces the typical conditions of social life," and that "the school should be life, not a preparation for living," are fundamental parts of Dewey's educational philosophy.

Other recent statements. Two recent statements as to the aim and philosophy of the educative process, which set forth still further the modern point of view, are of importance here, and may be cited.

In 1918 there appeared a Report of the Commission on the Reorganization of Secondary Education, appointed earlier by the National Education Association, entitled *Cardinal Principles of Secondary Education.* In this Report the Commission held that education in the United States should be guided by a clear conception of the meaning of democracy; that in a democracy each member should find opportunities to develop such as to prepare him for the largest usefulness to himself and to society, and that, consequently, education in a democracy "should develop in each individual the knowledge, interests, ideals, habits, and powers whereby he

will find his place and use that place to shape both himself and society toward ever nobler ideals." The Commission then proceeded to determine "the main objectives that should guide education in a democracy" through an analysis of the activities of an individual in our present-day life and world. These it determined to be:

1. Sound health-knowledge and habits.
2. Command of the fundamental processes (reading, writing, arithmetical computation, and oral and written expression).
3. Worthy home membership.
4. Education for a vocation.
5. Education for good citizenship.
6. Worthy use of leisure.
7. Ethical character.

These seven objectives were called the "cardinal principles" of secondary education.

In 1924 a new book entitled *Principles of Education* appeared, written by two professors at Yale, which discarded the old philosophical conception and terminology and restated the educative process in terms of the conceptions of modern biology and psychology and the changing needs of an economic and industrial civilization. This volume built up a philosophy of the educative process centered about the desirability of knowledge, under conditions of modern civilization, concerning six fundamental life-needs, namely: health, family life, economic adjustment, civic life, recreation, and religion; and then the authors applied the results to the study of the organization and instruction in the different divisions of the school.

These two studies, along with the work of Dewey, set forth well for us the modern conceptions of the educative process, and give us a thoroughly modern philosophy for the work of the school.

The teacher in the modern school. Teaching, in the light

of such new philosophy of the educative process as has just been presented, becomes one of the greatest of the fine arts. It also becomes a far more difficult psychological process than was ever dreamed of in the days of the dominance of the faculty conception of the mind. Individual results, as well as group results, must now be aimed at. The uniform course of study for all must give place to an adaptation and adjustment of school work to the particular needs and capacities of the pupils to be instructed. While drill is retained where drill is needed, and proper psychological procedures in teaching are given more emphasis than before, the newer conception of school work goes beyond either of these earlier aims. The guidance of a class group now calls alike for sound knowledge, well-developed teaching skill, an understanding of social needs, and an acquaintance with child life and the laws of its growth and development. Instead of being mere teaching institutions, engaged in promoting literacy and diffusing the rudiments of learning among the electorate, schools are to-day being called upon to train and develop youth, and to grasp the importance of their work as interpreters of the best in our political, social, industrial, and moral life.

What was said in the preceding chapter as to the importance to the teacher of a large fund of accumulated capital in the form of sound knowledge, professional preparation, good health, good personality, life experience, and social understanding has been further reinforced here by showing how important is a sound personal philosophy for the educative process itself. Once the teacher conceives of the work of teaching as that of directing the growth and development of children, of adjusting them through understanding to the political and social and industrial civilization of which they must form a part, and of helping them to develop sound moral character for the journey of life, a big step in the direction of a right professional attitude has been made.

Estimating the teacher's equipment. In this and the preceding chapter we have set forth the nature of the equipment of those who would teach in our schools, and the importance of achieving a sound philosophy of the educational process itself. To be able to estimate this preparation, somewhat more accurately than by guessing or by mere personal offhand opinion, a number of our school systems and teacher-training institutions have recently worked out what are known as rating cards or rating sheets. Many school systems also employ such rating cards to score the efficiency of teachers in service, the teacher being rated by three or four or five different supervisory officers on separate cards, and the ratings then combined into a composite scoring. A number of teacher-training institutions and city school systems have also evolved score cards for use by the students or teachers themselves, with a view to self-revelation and self-improvement.

The advantages of all such score cards and rating sheets lie in that they are far more objective than any mere subjective opinion or estimate of a person would be. Dozens of items or characteristics are enumerated and estimated, and the final result is a composite of a large number of estimates, rather than one lump appraisal. The result, while still somewhat subjective, is nevertheless far more objective than any single individual estimate could possibly be.

A personal self-rating sheet. With the discussion of this and the preceding chapter in mind, let us now try to evolve a personal self-rating sheet that will enable us to score ourselves, with a view to determining our fitness and needs, so far as we now can, for the work of teaching. The results would be somewhat as given in the form reproduced on pages 163–164, which gives a form of personal rating sheet that covers all of the points in the preceding discussion.

The scope of this chapter. In this chapter we have pointed out the need for a guiding philosophy of the educa-

TABLE II. PROFESSIONAL RATING SHEET AND SCORE CARD

Items	Excellent	Good	Average	Fair	Poor
I. SOUND KNOWLEDGE.					
1. General academic training					
2. Historical knowledge					
3. Literary knowledge					
4. Scientific knowledge					
5. Geographical knowledge					
6. Industrial knowledge					
7. Citizenship knowledge					
8. Appreciation					
a. Literary					
b. Music and Art					
9. Spoken English					
a. Quality of voice					
b. Pronunciation					
c. Enunciation					
d. Speech usage					
10. Written English.					
a. Handwriting					
b. Spelling					
c. Sentence structure					
d. Paragraph sense					
e. Literary style					
11. Student qualities					
a. Accuracy					
b. Industry					
c. Clear thinking					
d. Interest in learning					
e. Mental alertness					
f. Intellectual balance					
g. Ability to use knowledge					
II. PROFESSIONAL PREPARATION.					
1. Extent and quality of					
2. Breadth of					
3. Interest in					
4. Teaching skill					
5. Educational philosophy					
III. HEALTH EQUIPMENT.					
1. Physical vitality					
2. Health knowledge					
3. Health habits					
4. Health program					
5. Nervous control					

TABLE II. PROFESSIONAL RATING SHEET AND SCORE CARD
(*continued*)

Items	Excellent	Good	Average	Fair	Poor
IV. PERSONAL QUALITIES.					
1. Carriage and poise					
2. Dress and appearance					
3. Courtesy and refinement					
4. Personal force					
5. Initiative and self-reliance					
6. Mental balance					
7. Common sense					
8. Judgment					
9. Tact					
10. Fairness					
11. Sincerity, naturalness					
12. Truthfulness					
13. Devotion					
14. Idealism					
15. Courage					
16. Ability to enjoy					
17. Ability to shed worry					
V. LIFE EXPERIENCES.					
1. Reading for breadth					
2. Contact with people					
3. Travel					
4. Real things done					
5. Knowledge of life's problems					
VI. SOCIAL UNDERSTANDING.					
1. Human-welfare problems					
2. Social problems					
3. Economic problems					
4. Citizenship problems					
5. Understanding of children					
6. Modern life problems					
7. Understanding of youth					
8. Understanding of adults					
9. "Gift of the people"					
VII. AN EDUCATIONAL PHILOSOPHY.					
1. Character of					
2. Professional attitudes					

tional process, and have shown its importance not only in lifting teaching from the low level of day labor, but also in guiding and directing the teaching process itself. Such a philosophy gives aim and purpose and intelligent understanding to the work of the teacher, and somewhere in one's professional preparation a study of aims and purposes in education should come in, with a view to the formulation of a personal philosophy for the educational process.

Courses in the *History of Education*, *Educational Sociology*, *Educational Psychology*, *Theory of Education*, and the *Philosophy of Education* all aim to give such an orientation to beginning teachers. Courses in educational theory or philosophy usually aim particularly to formulate and state a guiding philosophy for the school. Many other studies, though, help in such formulation. Since the school attempts to solve democracy's problems by means of the education of youth, all studies that set forth the problems of our present-day life, or interpret child needs and child development, naturally help.

QUESTIONS FOR CLASS DISCUSSION

1. Think of some types of business and public service in which a worker might render quite satisfactory service without any philosophy concerning it other than to follow directions.
2. Show why good teaching can never be of this character.
3. What types of outworn educational philosophy might be found among teachers in service to-day?
4. What light does this chapter throw on the importance of summer-school attendance, and Sabbatical leaves for teachers?
5. Show how a whole school system, or a teacher-training institution, might work according to a poor educational philosophy, with inferior results, and few persons realize it.
6. Show how Pestalozzi's work was a revolution in thinking.
7. Show how our early theories of political equality, and the simple life of the time, alike naturally tended to create a uniform knowledge-type of school.
8. What do you understand by the disciplinary conception of education? Illustrate by grammar, algebra, or Latin.

9. Just what do you understand by "transfer of training"?
10. Contrast the teaching, in half a dozen particulars, in a knowledge-type school and a pupil-development school.
11. Restate the Dewey educational philosophy in your own words.
12. Show how the newer subjects of the school, as listed on page 157, aim to interpret our modern complex life to the child "by reducing it to terms he can understand."

EXERCISES AND PROBLEMS

1. What do you understand to be meant by the socialization of education? Give a number of illustrations.
2. The old school tried to teach morality by set lessons; how could a modern type school give such training? Illustrate.
3. Show that the teacher's philosophy, as set forth by Hyde, is a thoroughly sound and wholesome philosophy for the teacher to make her own.
4. A citizen asks you to give him a brief yet comprehensive definition of Education, which he can use in a talk he is to make. Write out such a statement as you would give him.

COLLATERAL READINGS

*Bagley, Wm. C. *The Educative Process*, chap. III.
Dewey, John. *The School and Society*, chaps. I and II.
*Dewey, John and Evelyn. *Schools of Tomorrow*, chap. I.
Frasier, G. W., and Armentrout, W. D. *An Introduction to Education*, chap. II.
Horne, H. H. *The Teacher as Artist.*
*Hyde, Wm. DeWitt. *The Teacher's Philosophy.*
Palmer, G. H. *The Ideal Teacher.*
Pearson, F. B. *The Vitalized School*, chaps. XIII and XIV.
Ruediger, W. C. *Principles of Education*, chaps. III-VI.
*Strayer, G. D., and Englehardt, N. L. *The Classroom Teacher*, chap I.
Thorndike, E. L. *Education*, chaps. I-III.

CHAPTER X

EARLY DEVELOPMENT OF THE CHILD

Long neglect of child life. The study of child development and developmental needs is a relatively recent undertaking; the organized, systematic, and scientific study of children is almost a thing of yesterday. Both literature and history have recorded the sad neglect of child life in all ages, and pedagogical literature up to a century ago also evidenced the harshness of discipline and the brutality of schoolmasters. It is difficult for us of to-day, with our changed attitude toward child life, to even imagine the pitiful life-conditions which surrounded children everywhere a century and a half ago. Often the lot of the children of the poor, who then constituted the great bulk of all children, was little less than slavery. Wretchedly poor, dirty, unkempt, hard-worked, beaten about, knowing strong drink early, illiterate, often vicious — their lot was indeed a hard one. With the rise of the factory system, near the beginning of the nineteenth century, the sad lot of the children of the poor was made even sadder. The demand for cheap labor led to the apprenticing of children to the factories to tend machines, instead of to a master to learn a trade, and there they became virtual slaves and the treatment of them was most inhuman. Often they were chained by a leg to a machine for long hours of hard labor, and beaten if they fell asleep at their task. Child welfare was almost entirely neglected, children were sworn at and cuffed and beaten at their work, juvenile delinquency was a common condition, and child mortality was heavy. Only the upper classes provided education for their children, and even this often was poor in quality and limited

in amount. Schools generally were pay institutions or a charity, and largely limited to certain selected children of church members or of the "deserving poor." Education as a birthright, as we know it to-day, did not exist. Reading and religion usually were the only free subjects, and the purpose in instruction was piety and obedience and not the development of powers and capacities.

Such was the history of childhood, so far as it may be said to have had a history at all, up to the rise of the great humanitarian movement early in the nineteenth century. Neglect, abuse, excessive labor, heavy punishments, mutilation, and often virtual slavery awaited children everywhere up to recent times.

The change in attitude. The year 1802 is important in the history of child-welfare work for the enactment, by the English Parliament, of the first law to regulate the employment of children. This was known as the Health and Morals of Apprentices' Act, and it marks the beginning of our child-labor legislation. It was 1840 in Rhode Island, 1842 in Massachusetts, and 1843 in England before any further child-labor legislation was enacted anywhere. Since about 1850 an entirely new estimate has come to be placed on child life, and a new importance given to national legislation relating to child welfare. From these pioneer beginnings the idea of child-welfare legislation has in time spread to all the leading countries of the world, and to-day it occupies a prominent place in legislation in all advanced nations. With the rise of organized labor, the extension of the suffrage to the workingman, the spread of popular education, and the vast new knowledge as to hygiene that has come to us since about 1875, the economic unprofitableness, as well as the moral wastefulness of such neglect of child life and child welfare, has been forced home upon us.

The epoch-making work of Pestalozzi with children led to

a new study of child life, and laid the foundations for the modern primary school. He set forth what was largely a new idea as to children. Their development he believed to be organic and to proceed according to laws. It was the work of the teacher to discover these laws, and to assist Nature in her work. The aim of education he declared to be — not religion and the Catechism — but "a natural, symmetrical, and harmonious development of all the faculties of the child." Froebel carried the study of children further, and revealed the vast and neglected possibilities for work with children. He saw and set forth the continuity of a child's development from infancy onward to maturity, and held that rational care and training were essential to the unfolding of the child's inborn capacities. Froebel saw, far more clearly than any one else had done before him, the unutilized wealth of the child's world; that the child's chief characteristic is self-activity; and the desirability of the child being led to find himself through directed play and activities. The kindergarten, with its motor-activity and learning by doing, was his great contribution. With individual development as its aim, motor-expression as its method, and social coöperation as its means, he created a new school for the child of pre-school age and did much to direct the thinking of mothers toward a new study of child life — to a study of what children really are now, rather than to what they should later become.

Rise of the child-study movement. Beginning with the naturalist Darwin, in England, who studied his boy's development with great precision and detail; the psychologist Preyer, in Germany, who published (1881) a two-volume work recording his observations on the first three years' development of his boy; and the American psychologist, G. Stanley Hall, who, returning as a student from Germany (1880), began a series of studies of all phases of child

life — a widespread movement soon developed, especially in England and the United States, the aim of which was to make a careful study of the child's development, both mental and physical. This movement, on the psychological side, was a successor of the new psychological study of school work — the Pestalozzian teaching procedures — which had come a little earlier; on the physical side it was an outgrowth of the new interest in hygiene and physical development that arose about this time.

During the late eighties and early nineties Child Study, as the new movement was then called, almost monopolized the educational field. The new Clark University (founded 1887) became the center of the movement, and G. Stanley Hall (1846–1924) its leader. It was now sought to ascertain just how child personality develops, and what are the laws of its development. Other workers weighed and measured and studied children to learn the laws of their physical development. Children were minutely observed from birth onward, and as they grew older were questioned and the results recorded, tabulated, and interpreted. Many magazine articles and monographs were written and published. Out of the mass of this and other work, coupled with what biology and psychology have taught us regarding child development, a body of teachable knowledge concerning the child, its growth, and development has been built up which we to-day, in its organized form, call *Child Study*, or *Child Psychology*. Some of the more important aspects of this body of organized knowledge we shall present in this chapter.

The first year of a child's life. The period of infancy has not usually been thought of as an educational period, but we now know that it is a very important epoch in a child's life. During the first year many nerve and muscle connections of large future importance are being made, and the foundation laid for later mental and physical responses.

At birth a human infant is a very helpless animal. The automatic movements of respiration, circulation, and digestion are at once in evidence, and certain simple reflex movements connected with touch are soon manifest. Aside from these the child is a helpless thing, dependent on parents and friends for preservation. From this time on to what is known as maturity the child is growing and learning through education of all kinds, and this prolonged period of infancy, as we shall point out further on in this and the following chapter, is of great significance in the life of human beings. It requires twenty-five years to educate a man and prepare him for independent earning in a learned profession, while a chick is able to shift for itself in as many hours, a kitten in as many days, and a colt in as many weeks.

During the first few weeks of a child's life its movements seem to bear little relation to any outward stimuli, but are random and aimless. They are nevertheless important, as they result from growth changes and inner organic conditions. After a few months the child begins to follow movements with the eyes and sounds by turning the head, the tactile sense begins to develop in hands and feet, and some equilibrium of head and body appear. The first associations of sensations and movements are now being formed. A little later, say by five to six months, random and meaningless movements begin to be replaced by rhythmic and partially coördinated movements, and movements seen and sounds heard begin to be repeated. Later crawling toward objects begins, and by a year old the child learns to maintain equilibrium when standing, and to get up and down on the floor.

The great gain in the first year is not in the number of new movements learned, but in the increase in the complexity, definiteness, and coördination of the movements made. Arms, legs, body, head, fingers, and eyes are all being trained

in movement, and visual, auditory, and tactual sensations come to mean much to him. These physical changes doubtless correspond with changes in consciousness taking place within, though just what his mental states are like we probably shall never know. The child's mental consciousness is still dim, and offers as yet but a faint promise of the wonderful new sensations that soon will burst in upon him and make of the world about him, as James puts it, "a big, blooming, buzzing confusion" that he will seek to understand and reduce to order. He is, during the first year, primarily engaged in connecting up his parts, and bringing them into shape for voluntary action and control. The first to be brought under control are the larger muscles of leg and arm and body and head, and later the smaller ones of hand and finger and eye. Somewhere between a year and a year and a half of age the child attains to that muscular coördination and bodily equilibrium that ends in being able to walk and run. The impulse to movement and to investigate, which begins with reaching and crawling and creeping and rolling over, finally culminates in an upright posture and walking. Locomotion and curiosity now unite for the exploration of the unknown world.

The rise of the instincts. It is often said that human beings are creatures of instinct. By this we mean that our actions are, at least at first, under the control of certain inborn tendencies to react in certain definite ways — ways that once were very useful in the preservation of the race. These tendencies we call instinctive tendencies. The newborn infant has only the few instincts which are necessary at the time, but as growth continues other instincts arise. Some instincts are transitory, as the sucking instinct; many are subordinated but not eliminated by education, as selfishness and fear; and some remain strong throughout life, as the instinct of self-preservation and the competitive instinct.

Man has more instinctive tendencies to actions of different types, and more complex instincts, than any other animal — a resultant of his long period of education and his complex life. Prominent among the more animal instincts are the feeding instinct, fear, selfishness, gregariousness, the fighting instinct, the sex instinct, and the competitive instinct. Among the more useful instincts and innate tendencies are those toward physical activity, curiosity, general mental activity, the social instinct, the tendency to imitate, and the play instinct.

A child's early movements are for his own well-being, and are concerned with obtaining things for himself. His individual needs and his curiosity-instinct combine to develop an individualistic instinct of large importance. His wants are often imperative, and, if other people will satisfy them for him, he comes to expect such service and to exact such attention. A wise parent early begins to train the child to state his wants quietly and politely, and ceases to do things for him as soon as he is able to do them for himself. At the time this may call for a conflict of wills, but in the long run it is the easiest thing to do, as the child early learns to calculate how much others can be made to do for him, and whose will is to have its way. By the fourth or fifth year he becomes even more calculating, and often more determined to look after his own interests. The question, "What are they good for to me?" is applied to both objects and persons.

By humoring such an attitude the child can easily become the center of the universe, as he sees it, and parents take the position of his slaves. This attitude carries over into the first four or five years of school life, and during this period he experiences many rude knocks from companions which are very good for him. This individualistic attitude is perfectly natural in a healthy normal child, and it is the work of education to guide it and to mitigate its effects until the rise

of more altruistic instincts gives an opportunity to build a better human structure on this individualistic basis. Out of love of self one later develops a desire to please, ambition, a wish for approbation, coöperation, loyalty, altruism, and devotion to an ideal.

Dealing with the instinctive tendencies. The instinctive tendencies of children are important factors in shaping conduct and the moulding of a personality. Coupled with each of the instincts is a strong emotional element which creates what some have termed an instinctive-emotional complex. The proper care and development and training of the child calls for some knowledge as to these emotional-instinctive and innate tendencies, that mistakes may be avoided. Fortunately the handling of children and youth is made easier by the fact that the instincts have their birth at fairly definite times, often in a fairly definite order, and many decline under training at certain definite periods. The problem then with some instincts is to wait, to let some run their course, to use some and fix them into habits, and to try substitution or even repression with others. We need to know what are the "nascent periods" of the different instincts that we may, as James puts it, "strike while the iron is hot."

We know, for example, the importance of early developing individual initiative, activity rather than passivity, training in polite ways, and the insistence on obedience to reasonable requests. At times this obedience must be implicit, and the child of six who has not yet learned the meaning of obedience and proper discipline not only is unfortunate, but his parents have stored up much future trouble both for him and for themselves. We know, too, the importance of self-esteem, and the use of this to enlarge the child's consciousness of personal worth and to inspire to valuable effort. The value of punishment at times in preventing a rank growth of

individualistic instinct, and the results of the rough-and-tumble of the playground in imposing control, are also well known. We realize, too, that at certain nascent periods there is great need of safeguarding the child against harmful domination by his instincts. The change in the character of school discipline that has come with the knowledge as to the instinctive tendencies and reactions of children, the whole modern organization of schoolground play as a means of assisting in the rational control of youth, and the organization of the junior high school as a better method of handling the changed life at the onset of puberty — these are examples of recent excellent efforts toward proper educational control.

We know, too, that there is a favorable time in a child's life for acquiring skill in the use of language, for learning music and studying art, for attaining skill in games and sports and in the use of tools, for gaining insight into industrial occupations, for biographic appeal, for hero-worship, and for a fine emotional enthusiasm for what is right and good and virtuous.

The most useful instinctive tendencies. Among the most useful of the instinctive tendencies which the school should foster and direct, by all the arts at its command, are the innate tendencies leading to physical activity, curiosity, general mental activity, the social instinct, the tendency to imitate, and the play instinct. It should be the work of the school to capitalize these instinctive tendencies in its organization and instruction. Physical activity is present from birth, and with this as raw material education begins. Much education must be through the muscles, and in improving motor responses the home first, and the school later, train for body control, poise, skill in movement, and finer and finer muscular coördination. The games of the playground and the activities of the laboratory and the shop

use and improve and refine this instinctive tendency, and the final result is seen in the accuracy and skill of the athlete, the pianist, the watchmaker, and the surgeon.

Curiosity — strongest in man and monkeys — is another tendency of great educational importance. Some children and youths exhibit much more curiosity than do others, and there is a rather close relation between natural curiosity and health and intellect. The tendency merely to pull things to pieces and to pry into other people's business are manifestations of this trait on the lower side, and the explorer, the naturalist, and the laboratory scientist exhibit it on the higher levels. Proper handling of children during the preschool years in the home, and good teaching in the school, can do much to stimulate the right development of this instinct and cause it later to pass over to a high intellectual stage.

The most distinctive inborn tendency of man is that to mental activity. More than any other human tendency has this one led to crime and destruction on the one hand, and to the extension of knowledge and the progress of the race on the other. Without this tendency the school would have but little purpose, and but little basis on which to stand. The work of the school is to take this tendency and refine and direct it into good channels. Skill here on the part of both the parent and the teacher consists largely in the ability to select subject-matter and use methods that will challenge right mental activity on the part of the child, and lead to intellectual growth along approved lines. Our many studies of school method, and as to what are the most appropriate teaching materials, have alike come as an attempt to satisfy better this innate human tendency to mental activity and to direct its action toward desirable ends. It is to the satisfaction of this tendency that the school has devoted most of its effort and strength.

Another innate tendency, the importance of which for education we have only recently begun to appreciate, is the social instinct — that desire for comradeship which finds expression in the personal chum, the clique, the gang, the club, the society, or the social set. Rivalry, emulation, love of approbation, competition, service, and willingness to sacrifice oneself for the group are all important outcomes of this instinct. In the pre-school age the personal chum or play-group often deeply influence the child's development and attitudes, and in the school some of the most serious problems of discipline hinge about those youthful attitudes toward authority which are the natural results of this social instinct. The gang especially may become very troublesome about the beginning of puberty, when the old migratory and fighting and robbing instincts come out strong. The old school dealt with this trait and its outcomes largely by ignoring it and repressing them; the modern school tries to utilize them for good by redirecting them and putting them to work. Much has been done in this direction in recent years by means of boys' and girls' clubs, the development of civic control in the school, organized groups, games, and other means, but much still remains to be done to make of this instinctive tendency a civic asset capable of enormous benefit to mankind.

This social instinct is one of the most lasting of all that control the actions of men. The desire for the approval of parents comes early, and is later superseded by that of the teacher, and then of companions. The personal-chum stage, too, develops early and often lasts long. The flowering time for this instinct, though, is from about twelve, when the gang spirit becomes prominent, on through puberty, when the ambitions are stirred and the desire for the approval of outsiders becomes prominent. To succeed in life and to make a name for himself now becomes the boy's goal,

and this carries over into later life in the form of self-esteem and care for one's reputation. The upper grades, the junior high school, and the senior high school are the opportune times of the school for the utilization of this instinct. Much of the recent club work and extra-curricular activities of the school have been introduced to try to direct this instinctive social tendency toward right ends.

The instinct to imitate. The tendency to imitate is strong in normal children, and is one of the most useful of the instincts for purposes of instruction. One probably learns by imitation nearly as much that is good and much more that is bad as he learns through instruction. For at least the first half-year of a child's life imitation is almost entirely a reflection of what others do and the attitudes they assume, and this type of imitation carries over into life. We say we are influenced by our surroundings, and by the people we are with.

A little later the child begins spontaneously to imitate what is seen and heard. He absorbs his environment and gains greatly in knowledge and power by the process. Anything that attracts his attention — the rooster, the locomotive, the telephone, the home arts, the actions and speech of people — will be imitated. The knowledge and the muscular coördination he thus acquires is of large future importance, for it is distinctly learning by doing. After the age of three the child often turns to opposites, as if surfeited with imitative knowledge; asserts his rising individuality; refuses to follow copy; and does just the opposite of what imitation would suggest. Usually the best handling of this stage is to ignore the new tendency, but if suppression is desirable it should at this time be thorough.

About the time that spontaneous imitation becomes well developed, what is known as dramatic imitation usually begins. By this is meant make-believe imitation, and for

some years this represents a very important stage in a child's growth. Often it leads to the assuming of other personalities, sometimes for days at a time, and even to real tears over the imagined illness or injury or misfortunes of a make-believe person. Imaginary companions become very real, and home-life processes are imitated in great detail. The writer was once much amused by watching a girl of about four years of age, in a hotel lobby, who, after talking to an imaginary friend over an imaginary telephone, took off her coat, looked it over, proceeded to wash it in an imaginary tub, hung it up to dry on an imaginary line, ironed it with an imaginary hot iron, and finally put it on again and showed her embarrassed mother that the job had been well done. The flowering period of this dramatic tendency is from four to seven, and in the kindergarten it is daily utilized as a means of instruction. Few adults realize the tremendous reality of the imaginary world in which the child often lives. The more intelligent the child, the more extensive and real this imaginary world is likely to be.

A still later form of imitation is that known as voluntary. While this appears as early as two, it does not become prominent before seven or eight, after which it is of greatest assistance in the school. The child now tries voluntarily to imitate what some one else has done. First-aid instruction in the school, as well as playground games generally, depend on imitative instruction. At the age of ten to twelve years, the child easily learns tone discrimination and language sounds, and now comes the nascent imitative time for learning music and foreign languages. Voluntary effort, which the school seeks to stimulate, can often be developed as an outgrowth of voluntary imitation.

The culminating stage in imitative learning comes in what is known as idealistic imitation. Beginning about the fourth year, with admiration for what is "nice" or "proper," it

blossoms out in the teens in the form of admiration and disgust, convictions and ideals, and loyalty and hero-worship. The moving forces are the ways and attitudes of parents, companions, teachers, books that are read, and good actions seen or pictured. Throughout the later pre-school years and the elementary school years this type of imitation is being shaped, but it is in the junior high school years that youth can be stirred by ideals of what is right and true and beautiful and good as never before or afterward. Ideals and convictions not infrequently are formed here which are held without immediate imitation, but which come out strong in later life.

The play instinct. All young animals play, and the play impulse in children is a combination of a deep-rooted animal instinct and a surplus of physical energy, with the social instinct prominent later on in the plays and games of youth. In the animal many muscular coördinations useful in later life are perfected through play, and children go through much the same experiences. Play, too, is an effective means for teaching how to work. Obstacles are met and overcome, disagreeable things are put through, and the clash of personalities is put up with to do the thing that is to be done.

The early play of children is free play, following no rules except what the child imposes, and is largely guided by the imitative instinct. By the time the child enters the kindergarten he has become a good imitator, but is highly individualistic and has little ability in coöperative games. Imitation of a teacher leader, impersonation, repetition, and singing are strong elements in the games of children from about five to eight. During the next two years, that is up to about ten, the boys change faster than the girls toward a marked individualism in play. Games involving daring others, competition, climbing, jumping, running, and the testing of the physical powers make a strong appeal, as do games involving

muscular coördination and sense judging. Handling children in these age-groups on the playground is difficult because they tend to scatter so. Swings, ladders, bars, ropes, marbles, and tops are all popular here. During the next two years the individualism continues, but tends to pass over into group competition of the tug-of-war, crack-the-whip, wrestling, and boxing type. Even the plays and games of the girls now take on a rough-and-tumble character. Beginning about twelve, and increasing through the whole adolescent period, a change toward games under a leader, and coöperative group-play involving rules and organization and loyalty to a side, become marked. Games which challenge courage, endurance, self-control, bravery, loyalty, and similar virtues now become favorites, and can be used with favorable educational results. Football, bat-ball, baseball, cricket, and volley-ball now become prominent, and group consciousness becomes a marked characteristic.

Supervision of the play differs in character with children of different ages. With the little ones the teacher must imitate and assist and guide and keep interest going, teaching them many simple games suitable to their ages. The middle groups are harder to handle, and must be allowed to follow much their own wishes, so long as these do not lead in harmful directions. The older pupils need starting and direction, but much less supervision, and the girls need more attention than do the boys. The value of good playground organization in building up good physical tone, in developing school morale, in transforming the yard bully into a good citizen, in bringing out timid and backward pupils, in teaching self-control, and in training the muscles and eye to coördination, are not likely to be over-estimated.

Preparation for a moral life. One not infrequently hears or reads of a child or a youth who has no moral sense. It is often said of such persons that they are neither moral nor

immoral, but unmoral. This is largely true, and the reasons for this condition, aside from low mentality, go back to the lack of proper parental training during the early years of the child's life. The first dozen years of a child's life are distinctively preparatory years, from a social and moral point of view, with the first six to eight the most important in the establishment of right habits of acting and in initiating the controlling "set" of the child's responses. It is during these years that the basis for a life of coöperative effort along social lines, rather than an individualistic and non-coöperative life, is to be laid. Much of what the attitudes of the future man or woman are to be are determined by the kind of parental control exercised, and the kind of social situation to which the child is exposed during the first dozen years of life.

The preparation for right living with others in society must begin in infancy. From the first, regularity in physical functions — eating, sleeping, cleanliness, etc. — should be established. Good physical habits make it easier to establish those other habits which lead to morality. The next step in the establishment of right habits lies in making proper ones pleasurable and wrong ones the opposite. Another step lies in training the child to control such instinctive impulses as fear, crying, fretting, shrieking, anger, and the like. This leads to self-control. As the child grows older the establishment of certain daily duties, and the principle of work before pleasure, are excellent in habit formation. Training to substitute future gains for present gratification also is useful. To learn to wait for meals instead of "piecing," to do without something to-day for a better thing to-morrow, and the savings-bank habit are examples here. The formation of right habits in acting and in ways of looking at things, and training in the selection of higher-type motives and responses in preference to those of a lower type, are very important during all this early period. In fact,

right action is so important that, if necessary, it frequently must be secured by compulsion or prohibition, though it is better, if it can be arranged, to so set conditions that the right action will seem the preferable one to choose.

Obedience, similarly, ought as far as possible to mean bringing one's self into conformity with a seemingly natural set of conditions that make the desired path the easier one to follow. Once chosen, the path should be persisted in until the desired habit is formed. Lapses to action along lower lines are demoralizing, and the growth of a child in the moral life is to be measured by the extent to which parents shape matters so that the higher motives to action make a strong and stronger appeal. The ultimate result desired is rational self-control. To this end all control, and at times the insistence on certain actions, should lead to the formation of such habits that self-control will follow naturally. When the time for self-direction comes, there must be an opportunity to exercise it as a means of fixing the habits formed, as control too long persisted in leads to weakness.

Up to about the age of twelve, the moral and social attitudes of a child are almost wholly the results of the training he has had from parents, companions, and teachers. Then a far-reaching change comes over youth. With the beginning of puberty a new attitude begins to express itself, and the birth of the real moral self, to which all up to this time has been preparatory, now takes place. The type of play changes, individualism tends to give way to group attitudes, selfishness to unselfishness, and new desires, impulses, and instincts come into play. How well this transition is effected depends on the previous training. At best it is likely to be a period of "Storm and Stress," and many wayward tendencies, especially with boys, are likely now to come out strong.

Now comes the nascent period for idealistic imitation and

the "set" of ideals of all kinds — truth, beauty, virtue, law, duty, courage, honor, achievement, success, personal fame. During the next half-dozen years the place and work and attitudes of the teacher, and the atmosphere and attitudes of the school, are of very great importance. Plenty of good ideals for imitation, good social surroundings, a strong and wholesome public sentiment, inspiration to work, plenty of activity, and opportunity to do and control things — these are fundamentals now in the moral and social training of youth.

Juvenile delinquency. Closely connected with moral training is the problem of juvenile delinquency. This is both less and more of a problem than it used to be, under the almost inhuman conditions surrounding child life a century and a half ago. It is less a problem because the environmental and home-life conditions of childhood to-day are better, and more a problem because of the increased opportunities for delinquency under the conditions of modern life. The causes for juvenile delinquency are many, there being no one cause. Heredity is something of a factor, but a far less important one than it used to be considered, except as it relates to those of low mentality.

Studies of the past fifty years have revealed the very large importance of home life, companions, and early parental care and training. Parental neglect and ignorance, wrong moral training or no moral training at all, orphanage, divorce, bad companions, and perverted instincts have been shown to be the causes for much of the delinquency of youth, and these are largely preventable causes. The large success of our State reformatory schools, where from sixty-five to seventy-five per cent of those who have gone wrong and been committed to them are reëducated and turned right, also indicates the importance of right early education and training. The studies made also have shown how fully

moral training must be made intellectually comprehensible to the child, and that moral or religious training that is not so connected is responsible for many of the less serious lapses of youth.

Our studies of children and of social conditions surrounding child life alike tell us that society now has both the knowledge and the means at its disposal to eliminate, in a few generations, at least three fourths of the delinquency in youth that it now permits to exist. How long our States will continue to spend more for the handling of juvenile delinquency and crime than they do for education is to be determined by how soon society can be made conscious of its responsibility for a continuance of existing conditions. The great progress in child-welfare work that has been made during the past century gives promise that the next century will see a cleaning-up of most of the conditions which at present lead to the delinquency of youth. The most stubborn cases will be those children who are feeble-minded or who possess but a very low grade of mentality, for in these the older animal and predatory instincts are strong and control is hard to establish.

Importance of the pre-school years. Probably no one thing that the many studies of childhood have brought clearly to the front is more striking than that of the great potential importance of the pre-school years. The responsibility of parents to society is enormous, for the type of men and women society secures is in large part determined by the kind of parents these men and women have had. Legally, the pre-school child is not as yet considered in the State's educational plan. The implied assumption is that these years are not important educationally, but nothing, from the psychological and social points of view, is more erroneous. The mental growth during the first six years is tremendous, and the type of intellectual, social, emotional,

and moral training given during these years largely determines the future personality. The attitudes, likes, prejudices, habits, and inhibitions the child learns, as well as the motor coördinations he develops during these years, largely shape his future behavior and determine his usefulness. As Gesell well puts it, "though he may not learn to read in the pre-school years, he is mastering the alphabet of life."

The problems of child-care, feeding, health, nutrition, diseases, abnormalities, preventive hygiene, mental hygiene, and moral training, and the dissemination among parents of proper ideas as to the care, nurture, training, and instruction of children, are of such tremendous importance to us as a Nation that we are likely to make far more of the pre-school years in the decades to come than we have in the past. Biologically, psychologically, socially, medically, morally, and educationally they are largely determining years. There are many reasons for thinking that the development of public hygiene and education for the pre-school years will in time be large. In England, France, Belgium, and the United States very important beginnings have already been made in infant-welfare work, child-hygiene, and nursery schools, while the kindergarten has been adopted extensively as an educational institution by the cities of the United States. The great problem now is to reach the home, and to carry to parents, and prospective parents, the large fund of information as to infant welfare and child development that the recent interest in child life — biological, medical, psychological, social, moral, and educational — has brought to us.

The scope of this chapter. This chapter has covered, very briefly to be sure, the larger aspects of child development and training as brought out by the relatively recent child-study movement, and as now organized under the educational subject of *Child Study*, or *Child Psychology*. Under

these titles, courses in normal schools, teachers colleges, and universities to-day aim to present the organized results of hundreds of studies as to the mental and social and moral and physical development of the child.

Some parts of what has here been presented also come in, by way of application of psychological principles, in the subject of *Educational Psychology*, though the courses named above aim to give more fully what will be useful to parents and teachers in the handling of children. In the chapter which follows this interesting subject will be carried further, especially emphasizing the biological and mental growth of the child of school age, and the great developmental periods in the life of child and youth.

QUESTIONS FOR CLASS DISCUSSION

1. Show how the coming of machinery in time made child-labor unprofitable, and more education a necessity.
2. Show that the work of Pestalozzi, in setting forth the idea of the organic development of children, according to law, was an almost necessary precurser of a new humanitarian and educational conception of child life.
3. Characterize the importance of the work of Froebel in laying the foundations for a study of child psychology.
4. Show why anything of such importance as the new child-study movement of the eighties and the nineties naturally, for a time, almost monopolized educational thinking.
5. Show in what ways the world is "a big, blooming, buzzing confusion" to a baby, and how he proceeds to reduce it to order and system.
6. Show how, with the progress of the race, deep-seated instincts, once very valuable, need to be subordinated to newer acquired tendencies to action.
7. Show the importance of learning to walk in stimulating mental development in a child.
8. Show why politeness has to be taught to young children, whereas social forms are acquired easily by the adolescent.
9. Show how the experiences and games of the playground are very useful in: (*a*) reducing the individualistic instinct, and (*b*) preparing the way for social coöperation at the outset of adolescence.
10. Show what is meant by "the moulding of a personality."
11. Man, by very reason of numerous and complex instinctive tendencies

to action, has greater possibilities for usefulness and destruction, for good and ill, than any other animal. Show the implications of this truth in the education of bright and active boys and girls.

12. Show what is meant by making the social instinct "a civic asset of large importance," and state what are some of the means to this end.
13. A dramatization of Hiawatha makes great appeal to first-grade children, while first-aid instruction is an upper-grade activity. Show that this corresponds with the development of the different types of imitative learning.
14. In history study, work in the lower grades centers about persons, what they did, and how they lived; in the upper grades about events, and actions, and moral ideas, in which personalities played a part. Show that this also accords with the development of the different types of imitative learning.
15. Try to estimate the social value of a well-organized school playground.
16. Explain what is meant by the reform school reëducating a boy or a girl.
17. In view of our studies as to the basis of morality, what would you consider to be the moral value of memorizing the Catechism?
18. Name some of the "existing conditions that lead toward delinquency in youth" that society could suppress.

EXERCISES AND PROBLEMS

1. Look up and report on the work of G. Stanley Hall as the leader of the child-study movement.
2. Compile, from bibliographies, a list of thirty to forty important studies of child life to show the range and nature of the movement.
3. Look over and report on some published study of a baby, to show the nature of the observations made.
4. Take three deep-rooted human instincts, and show the stages in transition from low to high forms of expression for each.
5. Classify the most useful instinctive tendencies of man in the historical order of the attention given to them by the school.
6. Give an illustration, from your own development, of each of the four stages of the development of imitation.
7. Read some encyclopedia article on the play of animals, and show how play functions in their life work.
8. Make an analysis of your own moral development, and show how it followed or did not follow the development outlined in this chapter.

COLLATERAL READING

*Gesell, A. *The Pre-School Child*, chaps. II, IX, X.
Hall, G. S., and others. *Aspects of Child Life and Education*. (326 pp.)
*Kirkpatrick, E. A. *Fundamentals of Child Study*, 3d ed. (380 pp.)
Tanner, Amy. *The Child*. (534 pp.)
*Waddle, C. W. *Introduction to Child Study*. (317 pp.)

CHAPTER XI

THE PUPILS AND THEIR NEEDS

The pupils of a class. Any observant teacher, on taking charge of a class or a group of pupils of any kind, anywhere in the middle or upper grades of an elementary school, would at once notice the evident differences in size, facial expression, physical development, motor activity, and health of the various children. Even in the primary years many marked differences are observable, though it is from about the fourth to the seventh grades that physical differences are most in evidence. In such grades one commonly finds children varying much in size and physical development. Some are tall and others are short; some are heavy and others are thin. Some are too large for their seats, and some are too small. A little closer examination will reveal a few almost physically perfect children, and others will be discovered to have defects of eye, ear, nose, teeth, or spine. A few will be found to be afflicted with nervousness, anæmia, or malnutrition. Tuberculosis may also be present in a case or two.

Yet, so far as grade work is concerned, the school has tried to deal with all the pupils in the classroom largely on a common basis. The necessities of graded school organization often require such mass treatment, though progressive school systems to-day give a degree of recognition to individual differences that a quarter-century ago was almost unknown. Better school classification, many forms of special class instruction, the school nurse, and the school physician have together done much to bring to teachers a recognition not only of individual physical differences, but also of the bio-

logical basis of child life and of the educational process as well. Our educational philosophy is to-day being reshaped in the light of our knowledge of the laws of growth, and of those biological processes which after all underlie all our thinking. We know now, better than ever before, that the nervous organization of the child, which is so intimately concerned in every act of knowing, feeling, and willing, is subject to purely biological laws, and that we can hardly expect to find normal instincts, emotions, intelligence, or conduct in children suffering from underfeeding, malnutrition, or disease. Our educational psychology is being more and more based on sound biological conceptions, and the mind of the child is being thought of less and less apart from his physical body.

Certain laws of growth. Numerous studies have been made of child growth and physical development, with a view to ascertaining what laws as to growth and development may be found. Large numbers of children have been measured and weighed, and the results have been tabulated, by sexes and ages. While each pupil is to a certain degree a law unto himself, and his development may vary markedly from that of average children and yet be normal for him, we nevertheless have established normal curves of growth in height and weight for boys and girls at each year age. The data for these may be found in books on child development, and are of value as norms for the comparative study of groups of children. The general curves for average growth in height and weight, from five to eighteen, are shown in Figure 14. The most noticeable feature of these curves is the acceleration in growth which girls experience at puberty, when they for a time pass boys in both height and weight, followed by a longer sustained development on the part of boys which enables them in time permanently to outstrip the girls. Any pupil, though, may be shorter or taller, lighter or heavier

than the average for his age, and yet his growth and physical development may still be perfectly normal for him. Growth in lung power and breathing capacity seem also to be rather closely related, for each age, to growth in height and weight.

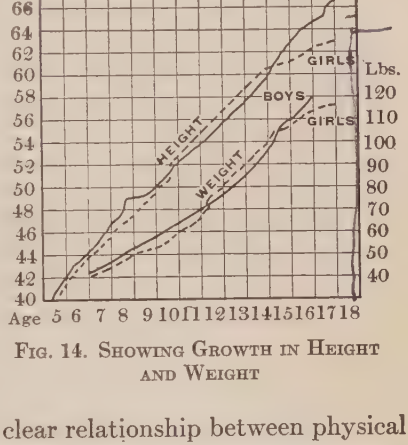

FIG. 14. SHOWING GROWTH IN HEIGHT AND WEIGHT

Investigations seem to point to an increased resistance to disease during the rapid growth period at puberty, though morbid conditions are likely to be more common at such times. It is often a critical period, both physically and mentally. For groups of children, too, there seems to be a clear relationship between physical and mental growth. While individual children may be small and advanced, or large and retarded, taken as a whole and throughout a school system, those children who have experienced the best physical growth are much more commonly the ones who have also made the best mental progress in the school. Another law that seems clear is that if the proper pubertal growth is delayed, the period of acceleration is shortened and the ultimate size of the pupil is less than it would otherwise have been.

Factors influencing growth. Two main classes of factors influence growth and physical development. The first of these we may classify as internal, or hereditary, and over this class the school can exercise no control. These embrace race, ancestry, and sex. Some races tend to be shorter or lighter than others, and some experience their pubertal de-

velopment later or earlier, with a resulting effect on ultimate size. Children, too, tend to be like their parents, both in looks and size. Short parents tend to produce short children, tall parents tall children, and parents of different heights children about half way between. This is not always true, but for the great bulk of cases the law holds. Girls, too, tend to be shorter and lighter than boys of the same stock or family. Heredity also largely predetermines many physical characteristics, mental traits, and even susceptibility to certain diseases.

On the other hand, there are many other factors influencing development which are not hereditary, and which we may classify as external. Some of these, such as economic and social and living conditions, are also as yet largely beyond the control of the school. But the school, by providing good hygienic conditions — heating, lighting, ventilation; by arranging its program of work so as to provide more activity instruction and less seat and book work; by careful health supervision of the pupils; by school feeding for those who need it; and by intelligent and helpful advice to mothers as to diet, sleep, clothing, and general care, given through the school nurse, the home-visiting teacher, or the school principal, can remove or mitigate many of the external influences which interfere with the proper growth and physical and mental development of the child. The classroom teacher, too, often finds herself in a position to be of much service. These facts emphasize the great importance for the teachers in our schools of a knowledge of child hygiene. Of the many retarding influences, probably the most important is malnutrition. There is hardly a physical defect of school children that is not induced, or increased in amount, by undernourishment or malnutrition. Still more, we know now that many of the physical defects of school children date their beginnings to poor nutrition during the period of early infancy.

This knowledge has recently given marked emphasis to a movement for better care and parental guidance during the pre-school years of the child's life.

Chronological and physiological age, and mental ability. By chronological age we mean the number of years and months since birth, and in most reckoning of ages and comparisons between pupils we use chronological age as the basis. To the school, though, the physiological age — that is, how far the child has advanced in his physical development — is often a more important matter. Cases in which this would be true concern applications for working-permits, participation in athletic sports, and at times with regard to questionable promotions from grade to grade. Children who rank high for their age in growth, and weight, and breathing capacity, and general vitality are much more likely to be mature mentally than those who are low in these respects. The question is, has the child reached the physical standard his years of age would properly call for. A year in the growth and physical development of two children of the same chronological age may mean quite different things.

Still more important for the school has been the recent development of our ability to determine somewhat accurately the mental ability of pupils — that is to say, how far any pupil has grown or developed in intelligence. Teachers have always known that some pupils were "bright" and others "dull"; that pupils differed widely in such traits as humor, cheerfulness, temper, sustained attention, will power, and working capacity; and that some children could do school work easily and make school progress more rapidly than could others. In our school classification we have recognized the slow, the average, and the bright, and often have classified pupils into separate classes on the basis of such teacher-judgment sorting.

Up to 1909, when Ayres published his *Laggards in our*

Schools, but little attention had been given to any studies as to the rate of pupil progress in our schools. His work called attention to a new problem, and for the next half dozen years much consideration was given, all over the country, to studies of retardation and acceleration of pupils in our schools. Many school principals were surprised to find that their school presented such a distribution as is shown in Figure 15, a condition commonly found. In

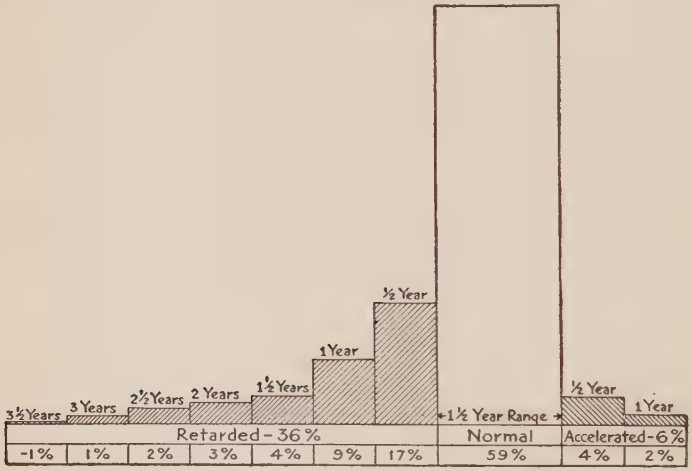

FIG. 15. ACCELERATION AND RETARDATION IN ONE SCHOOL

A pupil-distribution, based on acceleration and retardation, for one elementary school of 560 pupils.

practically all studies the number retarded greatly exceeded the number accelerated. Many schools were found which revealed greater retardation than is shown in Figure 15, while individual classes within a school (Figure 16) often showed a much worse condition than did the school as a whole.

If we assume that mental capacity is about evenly dis-

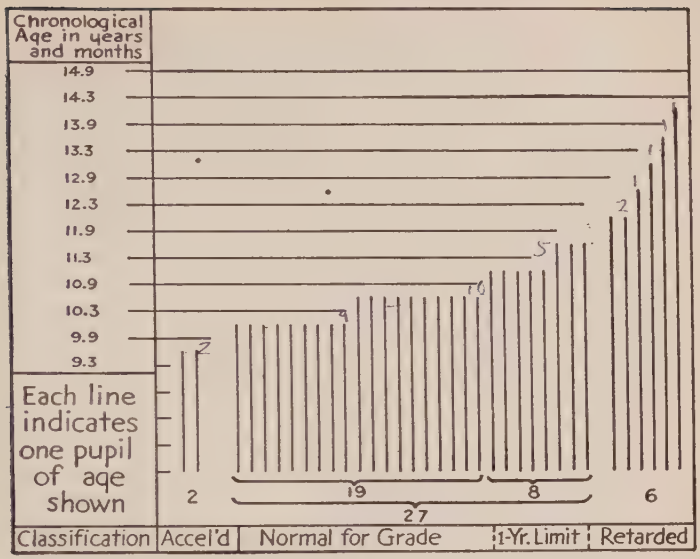

FIG. 16. AGE-DISTRIBUTION IN ONE 5B CLASS

tributed among school children, as recent studies (Figure 17) have shown it to be, and that there are approximately as many children who ought to get ahead as fall behind if the instruction is properly adapted to ages and grades, then the number of children accelerated after the second grade ought approximately to equal the number retarded. As this was almost never found to be the case, the natural conclusion was that the bright children in our schools were being held back instead of being advanced. The many studies made of acceleration and retardation, as revealed by age-and-grade-distribution sheets for classes and schools, did much to bring to the attention of teachers and school officers the marked differences in mental ability of school children, and to emphasize the need for some more accurate method of pupil-sorting and classification.

Intelligence tests and mental age. In 1908 Binet and Simon, two French workers, first published a preliminary scale for testing the intelligence of school children. This was revised in 1911, and became known as the Binet scale. The scale was soon translated into English, but was found to be poorly adapted to use with American children. In 1913 Terman, at Stanford, began work on an extensive revision and extension of the work of Binet. This was published in 1916, and has since been known as the Stanford Scale. It is designed for testing pupils one at a time. After the entry of America into the World War, group intelligence tests were evolved and applied in testing the men drafted for the army. These tests made possible the testing of a whole company at once. Since the close of the War, group intelligence tests have been perfected for use with school children of different ages, by means of which a whole class may be tested at one time. The Stanford individual tests are still much used as supplemental tests with individuals, and represent a more refined testing procedure than do the group tests.

The development of individual and group tests for the more accurate determination of the mental ability of school children represents a most remarkable recent achievement. They enable us now to measure and classify pupils, on the basis of standardized scales, with regard to their mental development. These scales no longer use such terms as "slow," "average," or "bright," but are expressed quantitatively in terms of 100 as normal or average. We now speak of the results as mental age. By means of these tests we are now able to measure the mental development of a pupil, or a class, with a reasonable degree of accuracy and, within certain limits, to predict the probable future outcome of education with any pupil.

Not only has the use of these tests revealed the wide range in mental capacity found among school children, but also

the remarkable persistence of mental ability or the lack of it has been shown. While we now know that the influences in one's education which may be due to nurture or environment are larger than a few years ago was thought to be the case, we still know that heredity is after all the great influence in determining intellectual capacity. While the schools may do much to develop and bring out the innate possibilities in children, the schools cannot create the possibilities themselves. As in growth and physical development, internal influences are by far the more important. Brains tend to breed brains, and feeble-mindedness to breed feeble-mindedness. It is inheritance that gives capacity; it is education that develops what inheritance gives.

Mental Age and the Intelligence Quotient. By means of a series of carefully selected and standardized mental tests, then, we are now able to measure and determine an intelligence rating for each child, based on his chronological age. Thus, if a child is 11 years, 0 months old in actual chronological age, and measures 9 years and 4 months, 11 years and 0 months, or 13 years and 2 months on the intelligence test scale, we can express the ratio in terms of a number, which we call the Intelligence Quotient (I.Q.), by dividing the intelligence-test age by the chronological age, each expressed in months. The quotient is the I.Q.

$$\left(\frac{112}{132} = 85 \text{ I.Q.}; \frac{132}{132} = 100 \text{ I.Q.}; \text{ or } \frac{158}{132} = 120 \text{ I.Q.}\right)$$

The studies of Terman and others have shown that intelligence is distributed among human beings much as is any other trait, such as height or weight — that is, that the great bulk of human beings tend to be average in height, or weight, or intelligence, and that the number of cases that vary from the average gets smaller and smaller as we depart further and further from the average at the center. The

results of his earlier studies, as given in Figure 17, have been borne out by later studies. If we call above 130 very superior intelligence, and below 70 feeble-mindedness, it will be seen from the Figure that a little less than two per cent

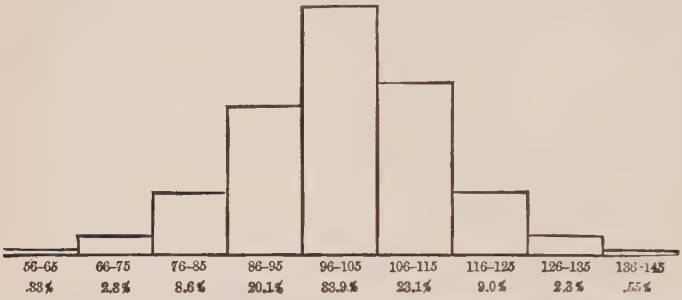

FIG. 17. THE DISTRIBUTION OF INTELLIGENCE AMONG CHILDREN

Based on the measurement of 905 unselected school children, 5 to 14 years of age. (From Terman's *The Measurement of Intelligence*, p. 66.)

of our school children would fall in either classification. Schools and classes will vary, though, some schools having a relatively high proportion of gifted children, and other schools a relatively high percentage of those who are slow and dull. The results of the use of the group intelligence tests worked out for the men drafted for the army showed that, of 1,700,000 men tested, 4 per cent were found to be very superior in intelligence, 9 per cent superior, 16 per cent high average, 25 per cent average, 20 per cent low average, 15 per cent inferior, and 10 per cent very inferior. The larger proportion of very inferior men was largely accounted for by the large number of South Europeans of inferior racial stock brought in by the draft.

Educational significance of intelligence measurements. The educational significance of this new means of determining the mental ability of school children is very large. Questions relating to proper classification in school, grading,

promotion, choice of studies, amount of work, schoolroom procedure, vocational guidance, and the proper handling of sub-normal children on the one hand and gifted children on the other, all acquire new meaning in the light of intelligence measurements. . When applied to children experiencing difficulty in their school work a flood of light has often been thrown on the problem. Retardation in school, truancy, immorality, vicious tendencies, and low mentality usually are found to be tied up closely together. As a means for guidance in the classifying of the over-aged, non-English-speaking, dull and slow, bright and erratic, truant, and disciplinary cases, intelligence tests offer a new tool of large usefulness.

The caution must always be given that there is always danger in using the Intelligence Quotient as a single measure of ability to do school work. It is a guide, and it is useful as corroborative evidence, but the readings should always be taken in connection with other evidences of ability, or the lack of it. Intelligence testing, still more, is a tool that experts should use, rather than teachers untrained in its manipulation.

Probably the two greatest sources of waste in our schools to-day come from trying to teach the slow and the dull what they cannot learn with any reasonable degree of success, and from trying to handle gifted children by school methods suited to average children. The first need special attention and often special instruction and classes, and the latter harder work and more of it. Under average methods the former become discouraged repeaters, and the others lazy loafers because they are never worked to full capacity.

The question of nature *vs.* nurture. While the school cannot create intelligence, and must work with what children bring to school in the form of native endowment, this does not mean, though, that there is but little the school can do to

improve conditions by instruction. The studies that have been made reveal, to a degree we had not thought true before, the wide extent of individual differences. They have also made us feel sure that probably no pupil in our schools ever reaches the maximum development of his own native capacity. After making all allowances for the importance of native endowment — and for this large allowances must be made — there still remains an important field for development through the influences of nurture and environment. Recent studies of this problem seem to indicate that the scope for the play of these influences is much larger than we formerly thought.

This, then, is the opportunity of the school. For all children the school should present the best possible environment in the form of buildings, heating, lighting, ventilation, sanitation, cultural and artistic influences, play facilities, and opportunities for self expression along good lines. For those in any way handicapped, it can improve such external factors as nutrition and home care, can remove many physical disabilities by means of a constructive school-health service, and can provide specialized teaching that will tend to bring out all the mental and moral and manual possibilities of such pupils. For the great mass of more or less average children the ordinary school organization will be sufficient, though the best of care and instruction still is needed. For those gifted children who represent both the largest promise and the greatest waste in our schools to-day, differentiated and extra instruction is called for, that they may early develop a habit of working to near capacity and an ideal of large usefulness and service. The different means for doing this will be referred to more in detail again, in Chapter XIV, under the heading of school classification.

Individual differences. The differences so far considered have been largely physical and mental, and the importance

of these has been pointed out. In addition to these greater general differences one finds numerous smaller differences among any group of pupils classified together as a school class or grade. In fact, the presence of many minor differences in strength, quickness in action and thought, accuracy, grasp, energy, and ability to do work are among the more noticeable characteristics of pupils, once one studies them. Every school survey has brought out, in connection with the measurement of instruction in the schools studied, the wide ranges in ability among the different pupils in any grade or class tested.

As an example of such differences, the following, taken from one of our School Survey reports, shows the results obtained on an arithmetical test with seventh-grade pupils in one school. Fifteen sets of tests were used, and the highest and lowest number of examples solved correctly varied, as follows:

Test.....	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Highest...	37	40	26	28	9	17	10	5	2	8	16	8	10	4	5
Lowest....	20	15	9	12	2	5	4	0	2	0	4	2	2	0	1

The largest number of examples was solved by a girl 12 years and 11 months old, who solved 225 correctly in 22 minutes of working time, or an average of 10.2 examples per minute. The lowest number of examples solved was 78, done by a boy 15 years and 1 month old, or an average of 3.5 examples per minute. An average of the total number of examples solved, distributed by ages, showed the following results:

Those aged :	11 years	12 years	13 years	14 years	15 years
Solved :	149	141	135	123	95

Such differences in ability to do work have been revealed everywhere such studies have been made. While these studies call attention to the wide variations in ability existing among the pupils in our schools, they still reveal little

that a study of individual differences would not lead us to expect to find. That pupils vary greatly in traits and abilities is a fundamental truth. The work of the school is to recognize these differences as existing, classify the pupils as best can be done, and try where possible to bring up deficiencies.

The large periods of development. In addition to those individual differences in physical development, native ability, and working capacity which we have so far considered, there are other important age-period differences which are common to all children. These characterize the different periods of physical and mental development through which children pass in their growth from infancy to maturity. These are of importance for the school, should be included here in any consideration of pupil development, and are of importance in school organization and the arrangement of school programs for work.

The period of infancy. The educational significance of the greatly prolonged period of infancy in human beings was first pointed out by John Fiske, in *The Meaning of Infancy*. He called attention to the fact that the lower forms of animal life have practically no period of infancy, to the lengthening of the period of infancy in animals with the increasing complexity of physical structure, and the social and educational meaning of the long period of dependence with human beings. There is a vast biological gulf between the infancy of a chick and the infancy of a child. In consequence of the long period of human infancy the family is held together, family-life ties are created, and a long period of feeding, protection, and training ensues. This period of dependence is a period of great organic plasticity and, in consequence, educational opportunity, and the results are evidenced in the far larger power of adjustment of man to his environment by reason of the longer training he receives

during his lengthened childhood. This childhood extends, biologically and psychologically, through the whole school period, and out of this man obtains his unique ability to grow and develop and make progress. Up to the age of five or six the training is left to the home; after these years the more formal education begins and is continued in the school.

During the period of parental care the child probably learns as much as during any subsequent period of equal length. He learns to handle his body, use his muscles, gets acquainted in part with a new world, learns to speak and understand a language, and is presumably taught the meaning of order and obedience. It is a period of large future importance. On every level — physiological, psychological, social, hygienic, sensory-motor — he is receiving a "set" which will in large part determine his future powers. So great is the physical and educational significance of these pre-school years that there is a well-defined movement under way, both in Europe and the United States, to make greater educational use of this pre-school period, that many of the disease defects with which children suffer may be eliminated and that stronger and more capable children may be produced for the years with which the school has to deal. The dissemination among our people of sound ideas as to child care, feeding, health, nutrition, diseases, abnormalities, and preventive hygiene are of great importance, not only for the future work of the school but for the Nation as well. Still more important is it, from the school point of view, that in the home the child acquire good habits, attitudes, preferences, inclinations, and inhibitions.

The elementary-school period. When the child comes to school the influences of his pre-school years are registered in his physical body, in his nervous organization, and in his mental attitudes. The experiences of childhood, as was pointed out in the preceding chapter, have been almost

confusing in their abundance. At this point the work of formal education begins, and in the first grade the child learns to follow direction and work in groups. It is a period of eager interest in action and new things, and immediate satisfaction is important. The will of the child is in the foreground, and the teacher keeps hers in the background. Will for sustained work is lacking. Interests come and go in rapid succession. The child has learned to live in the home society, and he now learns to fit into the school society. Still more, he is easily interested in the lives of other peoples and other times, as well as in fairy tales and myths. It is a time, too, of activity, imitation, and expression. The school work of this period is to develop the power to follow these interests, to train for sustained attention for longer and longer periods, to begin to weigh interests and make decisions, to establish habits and attitudes, to broaden the intellectual horizon, to give drill where needed and to develop some skills, but more to awaken tastes and to create interests and appreciation.

After a few years the pupils change in attitudes, and school discipline becomes a real problem. Beginning in the third or fourth, and extending through the sixth school year at least, the problem of discipline often is serious unless the teacher is resourceful and understands youth. Individualism becomes marked, especially with the boys, and they tend to break from social restraints. The plays and games of both boys and girls become rougher, and group consciousness arises, accompanied by a desire to manage things for themselves.

Exercise, action, nutrition, and play are important impulses now, and express themselves in mischief, restlessness, indolence, and wool-gathering. What the teacher has to impart often seems unimportant and lifeless by the side of those deep-seated human impulses. Civilization has had the

same struggle in its upward course. The teacher's task is to lighten and brighten the duties and work of the school, and to weight down the things of lesser worth penalties are often needed. To give children as much freedom as they can use, while carrying them forward in the paths laid down for the school is the work of the teacher. The goals must be kept near enough and seemingly important enough to hold the interest. Industry, patience, perseverance, carefulness, thoroughness, and thoughtfulness are desirable traits for the teacher to try to develop and fix, so far as can now be done. This pupil-age calls for capable teaching; the teacher must understand boys and girls, and through the warmth of her encouragement and her zeal for her work should strive to awaken the pupils to their best efforts.

The junior high-school period. With the beginning of the "teens" new biological and psychological needs appear, and the attitudes and interests of the pupils change. Physical and mental alterations of a very fundamental character now take place. A new social world begins to open up; individualism begins to be replaced by coöperative group action. The rate of physical development increases. The heart grows rapidly in size and strength, and the blood pressure increases. A period of active life sets in. At the same time, some of the earlier roughness gives way. Interest in the opposite sex begins to strengthen. There is a new desire for social contacts. Clumsily, awkwardly, yet eagerly the youth seeks to understand a new world which is dawning on his consciousness, and to fit himself into its social organization.

A new type of teaching and school organization is now called for — one that will be midway between the class-teacher type of instruction characteristic of the pre-adolescent grade school, and the individual-study type of instruction characterizing the full adolescent high school.

This is the period of the junior high school. It is primarily the time for the development of the right type of habit-reactions, sound conceptions of moral values, proper individual and group contacts between the sexes, and for giving physical, moral, social, and educational guidance. It is a time too, when attachments and ideals of large importance are most easily formed, when the "will" may be most readily strengthened, and when the personality of youth, which has been in the making for so long, can be most surely moulded into form. In school instruction it is a time for differentiation of work, for experimental studies to determine tastes and aptitudes, for guiding the expanding mental life along desirable lines, and for much participation in citizenship activities. The work of the junior high school is to carry the early adolescent development — mental, social, moral, religious, personal — along normal lines. This calls for real teaching skill. The teacher here must have unlimited faith in her pupils, and must work earnestly for the proper development of character and personality in each.

The senior high-school period. The later years of adolescence mark another change in the pupil, and the development of a new type of individualism. That which now develops is not of the type known in the upper elementary-school grades, when the pupil tends to break away from social standards, but rather one of individual effort to fit himself for his place in the world of people and affairs. Each pupil now tends to reach out to grasp the meaning of the world, to form plans for life, to find a useful career. Self, too, is far less in evidence than formerly. Strong convictions are easily established; a "set" in thinking develops; a feeling of injustice, once aroused, rankles. Individual differences often become markedly evident; individual outlooks demand different studies and types of training; and individual points of view are important. Group action and group loyalty

are likely at any time to run strong. Some sex differences in training now become of importance in planning the instruction of the school.

An entirely different type of teacher now is called for than was needed for the elementary school. There knowledge was of less importance than teaching technique. In the high school the reverse is the case. Method now counts for far less, knowledge and understanding for far more. Every subject may now be assumed to possess real attractiveness in itself, and every pupil to have reached a stage of intellectual maturity where motivation by the teacher is little needed. Education, culture, travel, knowledge of the world, life contacts, and social understanding are now the essentials. Good teaching ability is still of importance, but of much less significance than in an elementary school grade. The work of teachers and principals now is to study capacity, to guide and reveal youth to itself, to respect personality and to endeavor constantly but tactfully to bring pupils to realize the higher interests of life, and to help them to form ideals of personal usefulness and service. Discipline, when needed, must always be personal and carefully adjusted to situations.

The scope of this chapter. In this chapter we have given, first, a few of the more important fundamental laws relating to the physical development of the child, and have enumerated some of the factors influencing growth. These and other phases of child development would be presented in a course dealing with *The Physical Development of the Child*, or *The Hygiene of the School Child*. These courses give the teacher a good conception of the biological basis of the life of the pupil.

We next considered chronological, physical, and mental age, intelligence testing, the significance of intelligence measurements, and the question of nature *vs.* nurture. Such topics as these would come in a general way into the study

known as *Educational Psychology*, which all teachers in training should study. In a more detailed form these topics would form the substance of a special course in *Intelligence Testing*, or *Mental Tests*. Such courses are usually given in colleges or universities, and are designed to prepare teachers to give intelligence tests to school children. The question of individual differences, the meaning of infancy, and something as to the psychological and educational significance of the larger periods of child development also belong to the field of *Educational Psychology*, and would be treated as parts of such a course.

The phases of child development treated in this chapter form a very interesting study, and one to which many teachers find it profitable to give more than ordinary attention. Carried to any extent, it leads into the fields of biology and psychology, each a special subject by itself.

QUESTIONS FOR CLASS DISCUSSION

1. The growth tables and curves have been made up from the measurement of thousands of children; show how the growth curve of any individual might cover a shorter period than the curves show.
2. Would it be possible for the school to modify favorably such non-hereditary growth influences as social and living conditions? How?
3. Name some ways in which the school could influence favorably physical development.
4. Would there seem to be both physical and financial justification for the school providing, for children needing them: (*a*) mid-day lunches; (*b*) spectacles; (*c*) care of teeth; (*d*) simple nose or throat operations? On what theory do you base your replies?
5. Explain the tendency to promote over-age and "nice" children, and to hold back young but bright children.
6. Should acceleration and retardation be approximately equal, throughout the grades, in a well-organized and graded school? Why?
7. In most city schools the curve showing the distribution of intelligence among the pupils tends to be more bulged at one end than at the other, instead of being symmetrical, as in Figure 17. How do you explain this?
8. What effect would a rigid enforcement of the compulsory attendance laws have on the distribution of intelligence in the schools?

9. What changes in school procedure have been emphasized by the new knowledge as to intelligence distribution?
10. If nurture is of real importance, what can the school do to increase its influence?
11. Show the importance in education of the pre-school years, in the light of Fiske's theory of the lengthened period of infancy.
12. Show how the junior high school has a large importance educationally, instead of being merely a good solution of a building and pupil-housing problem.

EXERCISES AND PROBLEMS

1. Secure an age-and-grade distribution sheet for some school (this may be compiled, or taken from school survey reports), and transfer the results into a drawing similar in form to Figure 15. What does the figure indicate as to the school?
2. Observe a few lessons given by a teacher to a class, and then grade the pupils according to evidenced learning ability.
3. When observing instruction, note the different ways employed by the teacher in adjusting instruction to different learning capacities during the conduct of the recitation, the assignment, or in other ways.
4. Visit schools of different types and note differences in emphasis and the work of the teachers in: (*a*) primary grades; (*b*) upper grades; (*c*) a junior high school; (*d*) senior high school.
5. Examine some School Survey Report and note the differences in pupil ability brought out by the use of tests, in any subject and grade.

COLLATERAL READING

*Bagley, Wm. C., and Keith, J. A. H. *An Introduction to Teaching*, chap. VIII.
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CHAPTER XII

THE LEARNING PROCESS

Each generation must learn anew. It is of the utmost significance to us as a people, living as we do in such a rapidly changing world, that we have to begin the process of education all over with each new-born child. Each generation must start anew, and the gradual education of each child in the accumulated learning and experience and ideals and traditions and ways of thinking of its people presents at once the greatest difficulty and the greatest opportunity for progress. It is a work of large proportions, as was set forth in Chapter III, of both replacement and development. Education, in consequence, is raised to a position of great importance with civilized man, and the more rapidly society is advancing the more essential does it become.

Not only must we transmit to the new generation what an older generation has learned and experienced, but, due to man's greater intelligence, we are able to select from among the experiences and the stock of knowledge, emphasizing those things we wish to perpetuate and minimizing those we wish to repress. This ability to transmit a modified experience, and thus reshape our inheritance and in consequence make progress, represents one of the most striking differences between the brute creation and mankind. The animal reproduces a common set of habits and reactions; the human being changes these more or less at will, and progressively modifies his environment. We not only learn from our own experiences, but we are able also to profit by the experiences of others, and on the basis of the knowledge we thus gain we alter the character of that which is transmitted the better to adapt it to the needs of the life the new generation is to lead.

Our original nature. Like the animals, human beings are born with a group of instincts representing a part of their biological inheritance. Like a dog or a wolf or a lion, human beings, as they grow, respond instinctively to very primitive impulses, such as a desire for activity, both physical and mental; a wish for adventure; a longing for ownership and possession; a hunger for companionship and the stimulus of the group; an impelling impulse for play; a craving for praise; an inquisitive tendency that leads to investigation; and a strong tendency to imitate. These are great dynamic influences with boys and girls, and lead to all kinds of expression, good and bad. They form the great mainsprings of action and motivate, as we say, the conduct of children. This instinctive equipment, or original nature as it is spoken of, represents the racial heritage of every individual — a heritage that Mother Nature has stamped deeply into the nervous organization of every normal child. This heritage represents the results of the age-old struggle for survival. Fortunately, all these and other instincts do not reach flood tide at once. Instead there is a gradual dawning of them as the child grows older. Some appear early, and others late; earliest is the food instinct, and latest the sex instinct. Thus Nature gradually unfolds our racial past, and gives us time to adjust ourselves to each new surge.

With the animals this is the end of the process. The original nature with which they are endowed at birth remains throughout life their guiding and actuating force. There is little reason to believe that they are able to think over situations, and consciously to choose the response which they will make. The animal gains in skill and the selective responses which skill in any activity implies, but maturity for the animal means only the maturity of its original nature.

Original nature also motivates much of the conduct of man. The youthful rowdy, the runaway boy, the nomad

adult, the destructively inquisitive, the fighter, the robber, and the mob-minded activity of the pack all represent the workings of original nature. Man, unlike the animals, is capable of deliberately shaping his conduct on a different plane, and of modifying his original nature about as he desires. The law-abiding attitude, the love of home and country, the scientific spirit, righteous indignation at wrong, the ability to work long and hard for property and possessions, and a willingness to await the slow process of legislation in response to enlightened public opinion are all human modifications of the original tendencies mentioned above. The change in a youth from selfishness to unselfishness, from wilfulness to obedience, from egoism to altruism, from intolerance to tolerance, from irresponsibility to self-control, from roaming and fighting to organized play, from lust to virtue, from gain to service, and from selfish isolation to group coöperation — all are changes in the original nature of man as a result of education.

What, then, is education? Education, then, is the taking of an individual, possessed of a bundle of inherited instinctive tendencies to action, and the slow modification of these tendencies by emphasis, repression, redirection, and substitution so as to produce a result not only more or less different from what Nature unaided would have produced, but one also of a type that organized society desires and approves. This is the work of Nurture, and the extent and direction of its influence determines the scope and kind of education that will result. It comprehends the impress of family life, the church, the street, the school, and all the institutions of our complex social life. In the home and the school the old motives are used to stimulate interests in new directions; the bloodless tasks of the school are grafted on to red-blooded native urges; undesirable tendencies are allowed to fall into disuse where possible; and prohibitions and punishments are

employed where needed to counteract them. By far the most important work of education, though, lies in skillful redirection and substitution.

To effect these desirable changes in youth is primarily the work of the home and the school. Under present-day

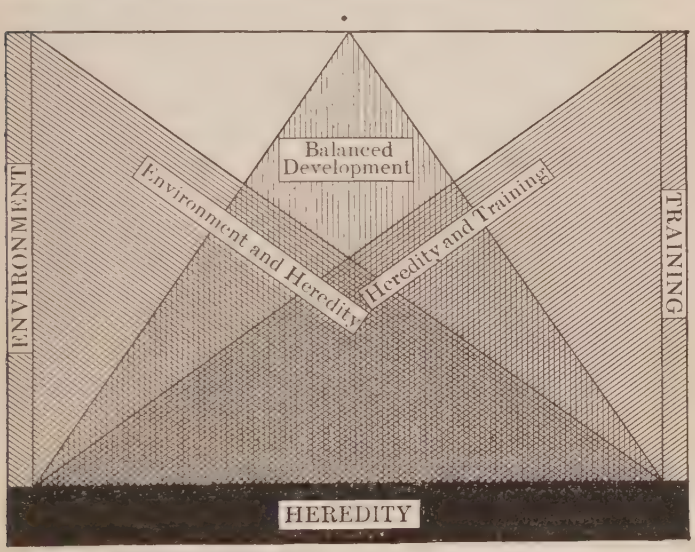

FIG. 18. HEREDITY, ENVIRONMENT, AND TRAINING

Showing the different results in the education of individuals, according to the relative influence of the two factors of nurture.

conditions the bulk of the labor, with many children, falls upon the school. It is in accomplishing these modifications that the real skill of the school is called into play. Like a good gardener, the teacher fertilizes, and cultivates, and prunes, and trains. This desirable tendency is encouraged, and that one is repressed and pinched back; this good shoot is allowed to grow and is properly shaped, and that one is resolutely pruned off.

Importance of the school and the teacher. For such intelligent developmental service modern society has organized the school and trains the teacher, and for the work the teacher needs a firm grounding, among other things, in educational psychology. This is the application of the principles of psychology to the work of education. It aims to give the teacher in the school a scientific basis for her work in training her pupils in skills, in thinking, to focus their attention, to solve problems, and to retain and apply what they have learned. It is important that the teacher know and understand the characteristic instinctive tendencies of each period of child development. What activities are now to the front? What habits are in the formative stage? What attitudes are now taking shape? What laws of learning do I need to know? What methods and procedures will now obtain the maximum results? How can I shape and direct my instruction so as best to adjust it to the wide individual differences in children?

The teacher in the school also needs a clear understanding of just what is her function at each age-period. This calls in addition for a good knowledge of the technique of teaching and of the fundamental principles of school management. To teach is to see broadly, to plan wisely and well, to adapt means to ends, to encourage here and discourage there, to stimulate pupils to activity, to guide and direct growth, and to uplift and inspire.

Still more, as was pointed out in a preceding chapter, the teacher needs to have formulated for herself a clear philosophy as to the nature and goals of the educative process. What, after all, are the ends to be desired? What do we want to do to, and with, the children in our schools to-day? What knowledge and skills do they need? What tastes and appreciations should be formed? For what are we preparing them? What changes in their original natures do modern

conditions of living call for? How can we substitute remote aims and ends for more immediate ones? How can we fit our pupils for a richer, a more useful, and a more abundant life? To what citizenship ends can the school minister? How can we best prepare young people for worthy membership in the home, as well as in society? How can we change the restless urge of instinctive life into strong and resistant traits of character? How can we develop "feeling attitudes" toward work and studies that will carry over into life and remain with the pupils? These are fundamental questions in our educational work of to-day.

The learning process. If such aims characterize the educative process, what then must be the nature of the learning process itself? We shall devote the remainder of this chapter to answering this question.

Every animal has a nervous organization. In man and all higher animals this consists of a brain, spinal cord, and a widely ramified system of nerves. There are main trunk nerves, thousands of smaller nerve fibers, and millions of "end" nerves in eye and ear, nose and throat, arm and leg, finger and foot. The smaller parts of the nervous system are known as *neurones*. These are long fiber-like nerve cells, so small as to be seen only with a microscope. A nerve consists of many of these fibers, arranged end to end, and in cross-section much as telephone wires are placed in a telephone cable. The brain is made up of millions of these neurones, and acts as the great "central" station for the whole nervous organization of the body. The nerves carry messages to and from the brain, as do telephone wires to and from "central." We put our hand on a hot iron and a message flies along the neurones to the brain telling of heat and danger, and a reply message flies back along other neurones to the muscles of the hand telling them to pull it away quickly. At first "central" does most of the work, but in

time other local centers are brought into action and trained to do the work and relieve the brain. The local centers or "local exchanges" are scattered up and down the spinal cord, and gradually they come to attend to much business that it was once necessary for "central" to handle. For example, once every step in walking had to be cared for by the brain itself; in time local spinal centers were trained to handle the walking process, and we now walk without thinking at all as to our steps.

In addition to being sensitive to impressions — touch, smell, sound, light, heat, cold — and able to carry messages, the neurones of man have another very important characteristic in that they are capable of much modification and change. Through sensation and conduction we get messages from the outside; our ability to learn with experience depends on our ability to modify the reactions to the sensations that come to us. For example, a child, through sensation coming to the eye and the transmission of this sensation to the brain, sees a nice attractive object in the form of a hot iron, and instinctive reaction tells the muscles to grasp it. He does so, is burned, and modifies his reaction in the future and lets hot irons alone. This is modification on a low plane. An instance on a much higher plane would be one in which a boy sees a stray cat and almost instinctively throws a rock at it, but his school instruction in kindness to animals leads to a complete modification of his behavior.

Similar modifications along all lines are with us the results of education. Animals and primitive types of men are unmoved by the sufferings of others, but educated man will defend the poor and oppressed, and even go to war to stop the oppression of peoples he has never seen. Instinctively we are selfish and egoistic; through education our responses are so modified that we become unselfish and highly altruistic. A sense of what is fair and right, willingness to lose

rather than win by unfair means, honesty under great temptation, restraint under gross provocation, and love of country ahead of self — all are examples of the modification of earlier and more natural responses under the influences of education.

Skill and habit. One of the most important parts of our education, though on a lower intellectual level than others to be mentioned a little further on, consists in the training of our muscles to acquire what we call skill in doing things. We learn to walk, slowly and painfully, but finally easily and well. The same process of slow development of skill by repetition holds for nearly every other form of muscular movement we make. We learn to use a spoon and then a knife and fork, to dress ourselves, to comb our hair, to throw and hit a ball, to swim and skate, to row and steer a boat, to use Indian clubs and a punching bag, to ride a bicycle and run an automobile, and to use a typewriter and play a piano. Each of these acquired skills we learn by practice. The initial muscular movements require careful and forced attention and are difficult to imitate, and at times it seems as though the new movement can never be learned. Persisted in, however, the skill is finally attained, the process reduced to "mechanized routine," and even the direction and oversight of the process is taken from the brain and given to one of the spinal ganglia — a "local exchange," to use the telephone analogy. The new response has now become fixed and easy and natural, and we make it almost without thought. We ride and walk, dress and shave, take our exercise, eat, play the piano, and drive the automobile, and at the same time talk to some one or think of something else. Yet for each of these skills a "learning curve" could be made which would show the ups and downs of our learning process.

When we have finally reduced the process to well-organized reactions, and often to mere routine, we call this an

habitual response and speak of it as having formed a habit. Hundreds of things we do each day have thus been gradually reduced to habits, and we do them now without being bothered by having to think about them. Habit thus becomes a very important friend, relieving us each day of the necessity of thinking about many motions and actions that we may have the time for the more important things of life. Well employed, our most useful servant is habit. The formation of right habits by means of motivated drill thus stands as one of the most important goals in education. For the formation of habits, interest, attention, training, practice, and encouragement are demanded.

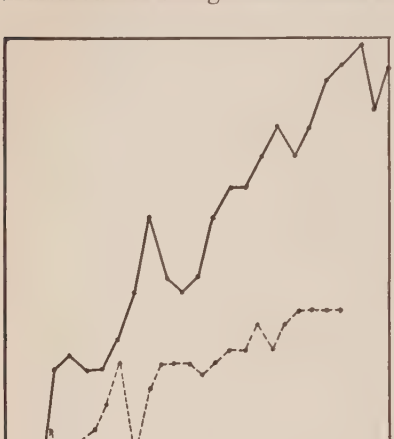

FIG. 19. LEARNING CURVES OF TWO PUPILS
(From Averill's *Elements of Educational Psychology*, p. 142.)

Knowledge. Another important goal in learning is the building up of the right kinds of associations of stimuli, and the formation of the right kind of "learned responses." This we commonly call knowledge. The goal now is not muscular reactions or habits, but right ideas. Movement of muscles, essential to the formation of habits of skill, may now not be at all essential. Sensation and images are now of far greater importance than action. As in the formation of muscular habits we depend on repeated muscular reactions, so in the instilling of knowledge we depend on the making

of repeated mental connections, or associations, and usually without any accompanying motion. Starting with what children already know, we try to build up new associations between the ideas the child has and the one we want him to get. Once the association has been made, we depend on the repetition of the association, or related new associations, to fix the idea and implant the desired new knowledge. The teaching of arithmetical and grammatical forms is primarily that of fixing ideas to symbols that they may have meaning, while the teaching of geography and history and science is preëminently the bringing in of new ideas and hooking them up with ideas already in the mind to form more extended knowledge. The function of knowledge is to give meaning to the things with which we are likely to be concerned.

The school has been organized as an economical institution for training young people in new and learned responses. In gaining new knowledge in the school the child is being trained to see new meaning in the things about him, to see the connections existing between facts and things, and finally, by reason of his growing insight, to see and formulate human relationships for himself as a guide to life. It is this continued search after the meaning of things and events and personalities that the school is to stimulate and bring to fruition. To do this well the school must understand the development and needs of the child, and must so motivate its teaching as to cause it to make the maximum appeal. This calls for keen psychological insight, that the teacher may know how and under what conditions children learn.

Perceptual learning. We mean by perceptual learning the training of pupils to recognize, understand, and interpret the stimuli that come to them. It is the "taking-in" of the significance of the stimuli received, through any sense organ, in terms of various associative connections that have previously been made and which are now used to "recognize"

the new stimulus. The recognition, in the school, usually leads to expression in written or spoken form. To this expression has been applied the term — *declaration of perceptual judgment.* The child who gave a perceptual judgment that "a pot of ferns was a pot of green feathers" had tried to recognize the new sensory stimulus in terms of other stimuli and associations previously experienced.

Two steps take place in the formation of a perceptual judgment. The first is the *analysis* of the stimuli. In the case of the ferns it was into shape, form, color, and texture. The second is a process of *synthesis,* during which the child puts together the stimuli to form a unified conception, which we call a *percept.* This process of analysis and synthesis we call perceptual learning. It is built on the past experiences of the pupils, and necessarily the ability to form perceptual judgments varies much with the age, sex, original nature, and life-history of the children. Large individual differences must be expected by the teacher.

Quickness of perception depends greatly on the ability of the pupil to "take in" and comprehend the significance of a new and complex stimulus. Even so simple a stimulus as a chair, a table, or a pot of ferns is after all made up of a number of different stimuli. In the beginnings these may need to be analyzed out, and then associated; later they fuse, and are recognized as a unit. Fusion is a mental process, and takes place much more rapidly with some pupils than with others. We learn to put together the meanings of this and that and the other, and to get the significance in time of very complex wholes. A rattle or an orange or a lead-pencil represent complex stimuli that are puzzlers to the child; later in life he comes to see the meaning — instantly — of a watch, an electric switchboard, or a motor car, each of which is a fusion of a large number of percepts.

Much of teaching is perception building. New materials

(stimuli) are referred to previously formed backgrounds (percepts) for recognition and understanding. To perceive the new thing presented is to grasp the relationships between the immediate stimuli and the associations of the past. Much of the failure of school children in learning is due to the failure of the teacher to make these connections clear. Often what seems perfectly simple to her is not at all comprehended by the child, because his past knowledge is not recalled and linked with what is being taught. Often the simplest of the old knowledge needs recall to make it effective. An illustration of this is found in the story of the man who said that he could draw a picture in three lines — a straight line, a crooked line, and a curved line — and then drew the picture given here. After careful looking his audience was unable to bring forward the right old associations in knowledge to form the proper perception and grasp the meaning of his drawing. When he told them that it was the picture of a soldier and his dog entering an inn, they "interpreted the stimuli" and "perceived" at once.

FIG. 20. A PICTURE IN THREE LINES

Associative learning. Skill and habit come from a training of the muscles to respond accurately to stimuli. Perceptual training is a higher process, in that we connect stimuli with ideas, and motor action is not necessarily involved. Perceptual learning is ideational, not muscular, and the goal is always the comprehension of stimuli coming from without.

A still higher form of learning is what is known as associative learning; here ideas are associated with ideas. It is based on the ability to remember facts as experienced, and is the goal of the learning process. Any stimulus, from within or without, such as the picture of a new dress or the

thought of one, may start a train of associations that will lead on and on — dress, cut and form, materials, silk, silkworm, Japan, Japanese people, trip to Japan, ocean steamer, travel, cherry blossoms, differences between American and Japanese cherry blossoms, tree, hatchet, George Washington, etc. One idea calls up another and another previously learned, and we associate them in some semblance of order and system. The human mind is constantly busy with associations, and the nature and character of these — good and bad — is the nature and character of the man or woman. Good early intellectual education consists in establishing a wide variety of associations and interests; good moral education in establishing right associations before wrong ones find a foothold. Our experiences group themselves in our minds into associative systems, and their recall is in accordance with definite psychological laws.

Knowledge of a thing is the sum total of our ideas — revived perceptions — relating to that particular thing. The richness or poverty of our knowledge is determined largely by our perceptual experiences. Original nature being equal, the child with a varied and wide perceptual experience must naturally have better knowledge than the child of limited perceptual experience. Broad interests, large sympathies, and deep understandings are largely the result of a rich perceptual experience.

The work of the school, then, consists in great part of enlarging perceptual experiences and in tying them together in the consciousness of the child. The problem of instruction thus becomes a problem in materials and methods, so that the aim of education may be reached economically and effectively. Much of the work of the teacher is that of providing the right type of situations, so that the pupils will make as many as possible of the associations for themselves. The great change that has come in recent decades from book

teaching to objective teaching, and from teacher activity to pupil activity, has been in recognition of this fundamental psychological percept.

Problem-solving. This involves the highest and most complex and most difficult form of learning. At some point in nearly every learning process — skill, perceptual, or associative — a problem is likely to face the learner, and he be called upon to think his way out. This demands the mustering of all related knowledge and the formation of a conclusion. Every one has to meet these problems. Life, if it is at all significant, is full of them, and the type of conclusion reached — constructive or destructive, wise or foolish — will be determined largely by the kind of associative knowledge which the problem solver has previously made his own.

Two standard methods of procedure in the solution of problems have been worked out — the method of what is known as *inductive* thinking, and that known as *deductive* thinking. One is the reverse of the other. In inductive thinking we muster our facts and then form a conclusion from them; in deductive thinking we start with a general principle and then apply it in the explanation of some fact. In teaching, the inductive lesson builds up facts and works at the discovery of conclusions or laws, while the deductive lesson aims to apply a conclusion to the explanation of other facts. For example, in geography teaching, suppose we desire to teach the concept, a trade center, and take Chicago as a type. We first study the facts as to Chicago — its location, railroads, shipping, size, business, etc.; and then, inductively, arrive at the conclusion that such a city must of necessity be a great trade center. Now, taking the concept of what constitutes a trade center as a starting point, we deductively apply it to other cities — New York, San Francisco, Liverpool — to see if they also are trade centers.

Induction builds up the facts and formulates the conclusion; deduction applies the conclusion.

Skillful teaching of the problem-solving type lies largely in creating situations in which the need for a solution is felt. This means stimulating inquiry and initiative, the awakening of a zeal for the discovery of truth, and the development of that "creative intelligence" which has led men to the application of knowledge in science and art, in the invention of machinery, in the evolution of new political and economic and legal systems, and in the improvement of our human relations and institutions. Problem-solving teaching is the opposite of text-book memorization and reciting. The modern project-method teaching is a fine example of instruction which employs this highest type of the learning process.

Attention and learning. The first law of learning, of any kind, is the law of attention. Every individual is continually subject to a great variety of stimuli. These strike the various sense organs and, were we unable to select out from the number those to which we desire to "attend," we should be at the mercy of our surroundings. If the reader of these lines, sitting in a "quiet" room and carefully "attending," will stop and begin the consideration of the number of different stimuli that are at this time coming to his or her sense organs — light, heat or cold, pressure of clothing, ache of a foot or sore finger, discomfort of a cold in the head, drip of the rain, sound of the wind, people talking or walking in other rooms, noise of a passing automobile or street-car, whistle of a locomotive — not to mention old associations of ideas which the printed page or some external stimuli recall and set going — the reader will realize the significance of the attending process. Fortunately, our minds are so organized that we are able to select out from among the stimuli coming to us the one or ones to which we desire to attend. The ability is the same with trains of

thought — we select from among ideas and associations those to which we desire to attend, and neglect the stimuli or ideas or associations to which we do not desire to attend. Put another way, we concentrate upon something we wish to think about or do.

Growth in attention. The ability to give attention is a growth. The infant gives attention to any thing, passes rapidly from one stimulus to another, and can hold attention on one thing for but a very short time. By the time the child enters school the ability to attend, or the span of attention as we say, has been materially lengthened. By practice and training in the home, and likewise in play, the child has learned to concentrate, and to select for limited attention those things that are socially approved or are required. The primary teacher takes him at this stage, and adapts her teaching to his attention span. The task of the school, as he grows older, is to lengthen the required periods of concentrated thinking, and to train him to attend for longer and longer periods of it. It is also the work of the schools to shift the attention he gives from free attention — that which he gives easily and naturally — to directed or forced attention, which requires an act of will and a deliberate selection from among stimuli. Still more, free or immediate attention is given to a situation for its own sake and its immediate satisfactions; forced or directed or derived attention is given because of some more distant goal. The ability to give forced attention is the mark of maturity, and it ultimately leads to the capacity for hard work toward goals that are years and years ahead.

Marked differences in attending power exist among children. Some are of the "scatter-brained" type, and never outgrow it; others are of the quiet-thinker type; most children are somewhere between these extremes in thinking ability. Yet the basal factor in habit formation, knowledge

building, and associative learning is the ability to give attention. Training to attend, then, in so far as this can be done by the school, is a prime function of instruction, and the power to attend should be trained and developed with all the skill of which a teacher is capable. Probably the best recipe for improvement in attending is improvement in the art of teaching itself, based on sound pedagogical procedures.

Memory and recall. To be able to retain what is learned, and to recall it as needed, we speak of as memory. Memory may be classified as desultory memory, rote or chronological memory, and logical memory. The first is characterized by a jumble of ideas, with little order or system, and persons possessing it usually think and talk in much the same way. This is the mind of the child, with his "heterogeneous hodgepodge of disconnected and disjointed ideas and images." The work of the school is to organize these ideas and images into systems of thinking. The characteristics of a chronological or rote memory is a faithful memory for words or facts, but without much organization of ideas. To an actor or a musician or a language student this is a valuable type of memory, but for sound thinking it is not so useful. In logical memory ideas and images have been organized into associative systems, and facts have been sorted and classified in order. This represents the highest type of memory. Children are usually lacking in this type of memory; it develops in varying degrees with maturity. Experiments reveal that people of low intelligence often have fairly good rote memories, but that logical memory is clearly associated with high general intelligence.

Children, as well as adults, differ much in their ability to retain and recall ideas and images. There is an old adage that a quick learner forgets easily, and a slow learner holds what he has learned. Tests and experiments do not show this to be generally true. Often the quick learner is the one

who retains most fully the facts he has acquired. There are marked differences, though, among people. Some brains hold information, of any type, with ease; others with difficulty. There is also much difference between pupils in the quality of the learning they do; some are very thorough, while others are superficial. Often the slow learner is a slow learner chiefly because of poor habits in learning, and these need discovery and correction.

To train in good methods of work and in thoroughness of learning is one of the important elements of good teaching. This calls for care in the assignment of tasks, instructing pupils in how to study, making many associations of new with old ideas, and the organization of associations into a logical order and system of thinking. This means, then, that we have, not a memory or a memory capacity, but literally thousands of memories, and that what we speak of as memory is a complicated and complex mental capacity, varying much with the quality of our original nature and the character of the training that that original nature has received.

The scope of this chapter. In this chapter we have covered hastily the field of applied or educational psychology. This deals with the problems of the original nature of our endowment, the question of nature *vs.* nurture, the nature of the learning process, skills and habit formation, interest, attention, memory, and the different forms of learning. It aims to apply the scientific principles derived from a study of psychology to the practices of the teacher in the school.

Courses in *Psychology* and in *Educational Psychology* are given in all teacher-training institutions, usually in the order named, and are usually required of all prospective teachers. Upon sound psychological principles all sound teaching procedure must be based. *Educational Psychology* is at the same time one of the most interesting and one of the most useful of studies to the teacher.

QUESTIONS FOR CLASS DISCUSSION

1. Show the significance, for the progress of civilization, of the fact that we do not inherit the "acquired characteristics" of our parents.
2. Show the difference in possibility in transmitting knowledge between a dog or quail mother and a human mother.
3. Show the importance for education of "the gradual unfolding of our racial past."
4. Show that the changes made in our original nature as we grow up are a product of heredity, environment, and training. Explain Figure 18, for the three cases there shown.
5. Show, in the case of man, the changing character of the educative and repressive influences to which he has been subjected, during, say, the past century, to produce "a type that organized society desires and approves."
6. Show that education as a science and teaching as an art must alike be founded on a sound psychology and educational philosophy. Distinguish between science and art as applied to teaching.
7. Show that habit may be our enemy, as well as our friend.
8. Enumerate the different kinds of stimuli from without which we learn to understand, and the end-organ we use for the purpose.
9. Illustrate the analysis and synthesis process in the formation of a perceptual judgment of a roller-coaster, which assume we have never seen before.
10. Show that the teaching of geography is largely perception building.
11. A pupil, in a written test, states that "the process of digestion causes headaches and much impure blood." What has been wrong with the teaching?
12. What light would the paragraphs on Associative Learning throw on course-of-study construction, school environment, learning and training of teachers, and methods of instruction with pupils?

EXERCISES AND PROBLEMS

1. Illustrate the teaching, in the school, of some new and learned response to replace some more primitive reaction.
2. Analyze the two different types of teaching called for in instruction in arithmetic and geography.
3. Suppose, in teaching history, you want to bring out the effect of the invention of the cotton gin in bringing on the War between the States. Draw up a lesson outline showing the facts you would teach, and the steps you would follow in both the inductive and the deductive part of the lesson.
4. Plan a problem-solving lesson on relative density, using wood, iron, water, and a bowl of mercury, and so as to lead the pupils to see that

a ship of solid iron would sail on a sea of mercury and sink in a sea of water.

5. Visit an elementary school, observe the teachers at work, and report on examples of the teaching of skills, perceptual learning, associative learning, and problem solving, as seen. What differences in method and plan were followed by the teachers?

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CHAPTER XIII

THE TEACHING PROCESS

At its basis a science. The work of the teacher is essentially that of producing desirable and preventing undesirable changes in the human beings entrusted to her care. Just what these changes should be have varied from time to time in the world's history, according to the aim and purpose of government and the needs of the society of the age. With us of to-day the purpose of teaching is to prepare young people for intelligent and useful living in our democratic Nation. Accordingly there are certain specific tendencies we desire to emphasize, certain undesirable youthful traits we wish to repress and get rid of, and certain new ways of reacting that we want to develop. We take human nature as we find it, and try to control and mould it into a form approved of by modern political and social and industrial life.

If the teacher is thus to control and mould human nature, the better she knows what this human nature is the more capable she ought, theoretically, to be. To know human nature and the laws of human action, however, calls for sound scientific knowledge. From the biological sciences, especially human physiology and hygiene, the laws of bodily growth and development are derived. From the science of psychology the laws of mental change and development are obtained. From ethics and the Christian religion — our Nation is a Christian Nation, and our laws are based on the principles of the Christian religion — we derive our moral code. From our form of political organization and its needs we deduce the kinds of civic training we desire to impart to our youth. Of these four, psychology is clearly the guiding

science of the school, and all sound teaching is teaching that is in accordance with psychological laws.

Teaching, at bottom, is the giving or the withholding of stimuli, that certain desired responses in human beings may be produced. By stimuli we understand all the means — words, gestures, books, directions, appliances, actions, urges, prohibitions — at the teacher's command; and by responses — actions, thoughts, emotions, interests, feelings — we mean all the changes the teacher effects in the life of the pupil. If we had a perfect knowledge of human nature — that is, a perfect psychology — we should know much more fully than we do now the effects of stimuli and the possibility of securing responses. Imperfect as our knowledge may be, though, it is far more complete than is the understanding and application of the known psychological laws by our teachers in their practical work.

In its practice an art. While biology, psychology, ethics, and government — with special emphasis on psychology — are basic sciences for the school, the practical application of the knowledge these sciences give us as to human beings and their reactions is to a large degree an art. Like playing the harp or the violin, or the painting of a picture, mere scientific knowledge alone will not enable us to produce the desired results. We must be able to apply our science to practical situations in a way that calls for something of the ability of the artist. Science is knowledge; art is the ability to apply it. Science is a body of principles explaining the nature of some act; art is a body of percepts and skills enabling us to do some special work. A science teaches us to know; an art to do. Science is a collection of truths; art is a body of rules and directions and abilities leading to some accomplishment. Science says, "This is, this is not"; art says, "Do this, avoid that." Science furnishes principles; art gives rules.

Every strong teacher, then, is an artist, and she plies her

art with something of the skill of the harpist. She touches the strings of human thoughts and emotions gently, giving the impression of vast reserves of power; she stimulates and soothes; she inspires and energizes; and at times she smites the strings with all the might of a forceful personality and rises to some great crescendo; and then, when her purpose is accomplished, drops back to those soft and gentle touches which are alluring and suggestive in character. The artist teacher is never wasteful of effort; she knows how much strength to use; she knows how to wait and bide her opportunity; and she works for the future with a fine indifference as to time. Often beginning without special skill in application, the true teacher builds up her teaching technique as she learns her art, and in time finds that she has entered on a work of such absorbing interest — a task so full of human comedy and tragedy and hope and affection — that she is led, little by little, and almost insensibly, to put her life and soul into it. She teaches because all the better elements of her nature compel her to teach; she becomes the artist teacher.

All that biology and psychology and ethics can do for education in giving it a scientific foundation remains ineffective, except as knowledge, until transformed into life through the insight and skill of the artist teacher. Yet the artist teacher needs knowledge as a guide, and all our experience shows us that the so-called "born teachers" usually become formal and lifeless and dead in time unless they set themselves seriously to a study of the scientific foundations which underlie their art. The fundamental scientific knowledge of the school is needed to correct mistakes, to save time and wasteful effort, to direct where "intuition" gives no clue, to lead away from the ordinary and the commonplace, to prevent satisfaction with mediocre attainments, to make one conscious of the limitations of one's

art, and to subject all one's endeavors to the cold and impartial judgments of science. While the teaching is tinged through and through with the colorings of art, the real teacher rises to the level of the applied scientist as well as the artist.

In the two preceding chapters we stated the problem of teaching as represented, first in the pupils themselves (Chapter XI), and then our scientific knowledge as to the learning process which human beings follow (Chapter XII). In this chapter we shall next consider what applications of this scientific knowledge can be made to the actual teaching process to guide the classroom teacher in the school.

Favorable working conditions. In the first place, external conditions need to be so set that good teaching may be done. All that biology and hygiene teach us only serves to emphasize the great importance in instruction of the right kind of environment for both the teacher and the child. Much of the work of the school administrator is to the end that school organization, administration, equipment, and supervision may be so shaped that teachers and children may be brought together under such advantageous conditions that the instruction may be carried on in the most profitable manner possible. If the environment factors are unfavorable, the instruction is deprived of much of its effectiveness. Some of these environmental factors the teacher can control and should know about; others she is not responsible for. It is important, though, that the teachers in our schools should have exact knowledge of what conditions should be and what factors in the physical environment they can and ought to control. To this end we commonly include, in professional courses for the training of teachers, some such study or course as is represented by *The Hygiene of the School Child*, or *The Growth and Development of the Child*.

In addition to the larger environmental factors, there are many routine classroom procedures for the effective working of which the teacher alone is responsible. These relate to the daily time schedule, the ways in which work is to be done, the saving of time, the seating and order, the handling of wraps and supplies, the movement into and out of the room, general orderliness and cleanliness within the room, the necessary signals and procedures in moving about, the prevention of confusion, the conduct of the recitation and work periods, the imposing of discipline and control, making the discipline productive, having a business-like basis of government, guarding against both "over-done" and "under-done" routine, the general bearing of the work of the teacher on that of other teachers in the school, and the establishment of such relations between teacher and pupil as will promote the fullest coöperation and the greatest progress. The study of these routines and procedures, or factors of school management, belong to that course in training, given everywhere, and commonly known as *School Organization and Management.*

General psychological laws. In addition to favorable working conditions and proper routine procedures, effective teaching of any type is best promoted if the whole teaching process is conducted in harmony with certain well-established general psychological laws relating to the action and development of the mind. The more important of these have to do with the basis of all learning, the motivation of interest, the laws of attention, and self-activity and expression.

As was pointed out in the last chapter, all new stimuli must be interpreted and understood in the light of the previous experiences of the child. This calls for an understanding of the development of the child's powers on the part of the teacher, the keeping of instruction on his level, the recalling of appropriate experiences as a preparatory

step in recitation work and lesson assignment, the use of much concrete material in instruction, and the extension of experience by applying the new knowledge so as to enlarge the child's associations. In problem-solving instruction much recall often is necessary. These fundamental principles underlie all instruction: In addition, a few other broad general principles are of importance here.

As was stated in the preceding chapter, the basal factor in all habit-forming and knowledge-building is good attention. During the process of learning anything, be it either skills through motor activity, or knowledge through sense-perception, close and conscious attention is required. We organize our associative or knowledge systems later out of the knowledge we obtain by building up concepts and ideas, and this type of mind-building calls for discriminating attention and concentration. The teacher, then, must learn to so conduct her teaching, whatever its type, that she may eliminate, as much as possible, that scattered and half-hearted attention so common in schoolrooms, and which inevitably leads to wrong habit-formation and serves to defeat the knowledge-getting process on its higher levels.

To give good attention there needs to be some motive for doing so. Human beings seldom do anything without a motive, and children in school only when driven to do so by a teacher. As opposed to merely keeping children at work is teaching which leads and arouses and inspires the will to do. This kind of instruction we say is "interesting" and has motive behind it. Often we speak of it as motivated instruction. It interests, it appeals, and it leads to willing achievement. In a word, the acid test of a teacher's methods is whether they impel boys and girls to throw themselves whole-heartedly into the daily tasks of the school. To supply live motives for the study of the various subjects laid down in the school course naturally is not easy, desir-

able though it may be. Good motivation, which awakens interest and challenges capacity to do, calls not only for good subject-matter and knowledge on the part of the teacher, but for a good understanding as well of the psychology of children of the particular age with which the teacher has to deal.

Attention and motivation are more easily secured if the instruction can be made to utilize the primitive instinctive urges to self-activity and self-expression. Especially with little children is this a strong and impelling motive. In instruction in such subjects of study as drawing, music, manual training and shop work, and the household arts, self-activity is the dominant characteristic. The teacher of any subject, however, needs to grasp intelligently the conception, too often neglected and forgotten, that learning comes through the activity of the pupils rather than of the teacher, and that the chief function of teacher-activity is to stimulate the pupils, both in study and recitation, to self-activity.

With these general principles stated, let us now pass to a brief review of the main types of classified teaching procedures.

Textbook teaching. Most teaching is still textbook teaching, and most teachers are textbook teachers. New teachers nearly always begin this way, and some never advance beyond this earlier type of work. Once the textbook method was almost universally used; to-day the more progressive teachers have advanced to better methods. The textbook itself is a necessity, but the objection is to recitation-hearing from the text, with the page assignment at its close. This type of teaching is unintelligent, and requires but a low level of pedagogical skill. It likewise requires but little in preparation or interest on the part of the teacher.

It is not that the textbooks are undesirable in themselves,

for they are often very good books and very useful to the pupils. They are usually well-organized sources of information, and valuable aids in instruction for the pupil and for the beginning teacher. They offer condensed and illustrated outlines of the different subjects of the course of study. Our American textbooks, too, are better than those in use anywhere else in the world. The chief objection lies in that teachers use them as a basis for a daily memory grind, and that the recitation period is used, not for an exercise in thinking and widening knowledge, but for memory testing on the contents of lessons assigned for study. Few children know how to study, except to memorize; the memory work leads to little real thinking; the method is deadening to interest and attention; but little motivation of the instruction is possible; with pupils of differing abilities a few tend to monopolize the hand-waving contest; the class time is wasted and the interest of the brighter children destroyed while the teacher tries to extract responses from the slower members of the class; and the testing at best is only a partial "sampling."

The trouble is that beginning teachers, and teachers who have not advanced sufficiently in their professional knowledge to be able to use a better method, employ the textbook as a basis of, instead of as an aid to, instruction. Used as a source of information, as a reference, as an aid in problem-solving, and the information it contains as a basis for class discussion and for reviews, the text becomes a real help instead of a hindrance to knowledge getting, associative learning, and problem-solving. Put another way, the best use of the text is as a supplement to classroom thinking and problem-solving. In this way interest and attention are kept alive, each can contribute what he is able to give, and the use of the text can be motivated by the skill of the teacher.

Organizing and conducting a lesson. If we think of a class period as a lesson period, instead of as a recitation period, we get a clearer idea as to what should be its purpose. All our psychology of the learning process dictates a different use of the period than for textbook reciting. The time should be used by the teacher for some definite teaching purpose. Having reached a certain stage or point in the development of the subject, to-day she proposes to do some certain thing. This involves a plan for and a purpose in the instruction. Effective and economical teaching involves this type of preparatory thinking on the part of the teacher. Having a definite plan, written out or mental, for what is to be done and how it is to be done, the teacher is ready to make the period a training in thinking and the extension of knowledge.

The directing of a lesson, or the carrying along of the class thinking, calls for some real skill in questioning. The questions must be thinking questions, skillfully put, and not merely testing questions. Questions that suggest the answer, questions that can be answered by merely yes or no, questions of such limited scope that every one is answered immediately and with a flourish of hands, represent poor forms of questioning. Asking questions in rotation around the class, repeating questions for inattentive pupils, and repeating the answers given by pupils, represent bad teaching technique. Questions should be thought-provoking, and a part of the teacher's preparation for the lesson should be the thinking out of a number of good questions that she will ask. These should be clear and concise; they should challenge thinking; often they should attract attention by their novelty and searching character; they should be in proper sequence; and they should cause the pupils to organize their experiences and to ask questions of the teacher. To find out whether the pupils have read the text or other references in-

telligently a few fact questions will suffice. Before the lesson closes, some organization of what has been learned today should be made, and this should be tied on to what is already known.

The lesson should close with the assignment for the next period. This should be a clear statement of what is to be done; what is the aim and purpose in the new assignment; where to find the information or materials; how to study the problem; the chief difficulties to be encountered — all these are part of any good assignment. If the new work presents unusual difficulty or represents a new type of learning, time should be taken to show how and what to do.

Studying and supervised study. Studying is usually interpreted by pupils as reading and memorizing, in preparation for recitation testing. If the psychology of the learning process as stated in the preceding chapter is correct, a different conception of studying ought to be introduced. To acquire knowledge is only a part — probably an unimportant part — of the process. Instead, studying ought to enlarge concepts and associative systems, and be in the direction of problem-solving, creative thinking, or conclusions based on evidence. The nature of the assignment made by the teacher, and the character of the conduct of the subsequent lesson period, will do much to determine the value of the studying the pupils do.

Since learning how to study is an acquirement which many children never really master, and one of great importance for a thinking-type of lesson period, many teachers have undertaken to supervise the study of their pupils. Some school systems have even abolished all home study in at least the first six years of school, and have substituted directed or supervised schoolroom study in its place. This is not the "policed study" of the high school "study room," but directed class-group study. It involves careful and de-

tailed assignments of work to be done, study of the assignment with or under the direction of the teacher, individual supervision of pupils and help where needed, and the testing of the progress made by good questioning procedure. Its purpose is to substitute directed classroom study for the wasteful and inefficient so-called home study; to adapt what is done better to the individual abilities of pupils; and to make it throughout a training in thinking and learning. By such direction and supervision it is felt that sufficient interest is aroused and sustained to motivate the study, lead to a desire for improvement, and on to the creation of a problem-solving attitude on the part of the pupils. There are, of course, successive levels in study-guiding as we move upward through the school, and supervised study must of necessity progress from mere directions as to how to study a particular lesson to the standard forms of attacking study problems.

The inductive-deductive technique. In the chapter on the learning process it was pointed out that two steps — analysis and synthesis — take place in the formation of a perceptual judgment. Much of teaching is perception building, and the joining of perceptions into associative learning.

To the philosopher and educator, Herbart, we are indebted for the application of this psychological principle to the teaching process in the form of a definite lesson-planning procedure, working upward through induction to a conclusion or discovery. His contribution to the art of teaching was his organization of a series of steps in lesson-planning as an aid to logical thinking and teaching procedure. To the four steps he developed his successors added a fifth, and these have become known as the Five Formal Steps of the inductive-deductive teaching technique. They are:

1. *Preparation.* This is the recall or "review" of old related experiences or knowledge, already possessed by the pupils, but which they might not be able to use in understanding (perceive;

apperceive) the new knowledge unless it is recalled to their consciousness. When this has been done, and sometimes before, the teacher states the aims of the new lesson and explains to the class what they are now to do.

2. *Presentation.* The new concrete materials of the study — facts — are now presented by the teacher, gathered from books, or obtained by observation and experiment. These may be given quickly, or their presentation may extend over days.

3. *Comparison.* The facts learned are now organized, under the direction of the teacher's questioning, so as to lead the pupils to discover for themselves the fourth step in the process — the generalization, or the truth that it was the purpose of the lesson to teach.

4. *Generalization.* The climax of the inductive process is now reached, and the rule, definition, formula, principle, or truth, to discover which was the object of the lesson, is now brought out. If it does not come out clearly, parts of steps two and three must be repeated, or added to, so that the truth may become evident to all.

5. *Application.* This is the deductive part of the teaching, the generalization arrived at in four now being applied elsewhere to see if the rule or principle holds.

The lesson thus begins with the known and the concrete, passes to the general or abstract in four, and then back again to the concrete and particular in five.

The refinement in teaching technique thus worked out marked an important forward step in the organization of the teaching process into scientific form. It is a vital method for the teacher to learn to use, though its use is limited to logically-organized subject-matter, such as the sciences, languages, history, and geography. While it is not, as was at first thought, a universal method, it is nevertheless the one that has proved most fruitful in the discovery of truth. Especially in science has the method given the world many valuable discoveries. It is, therefore, an important one for the training of pupils in logical thinking; it makes the best possible use of many details that otherwise would be

memorized to no purpose; it makes teaching objective and motivated; and it selects out for memorizing the principle or truth worth knowing.

Problem and project method. Out of the wide use of the inductive method a further step in thinking has led to the conception that every lesson should have a clear aim and purpose, in the minds of both teacher and pupils. Coupled with this has come another conception that what the school does should be real and purposeful; that it should be life — not a preparation for life. This is the seed-thought of the educational philosophy of John Dewey.

The problem method probably lies half-way between the inductive-deductive method on the one hand and the project lesson on the other. It employs the same psychological principles as were stated under problem-solving thinking in the preceding chapter. It is a teaching process that deals with problems on the mental plane, that is, with problems that are contemplative, reflective, or supposititious in character. It deals with cause and effect, and applies learned data to new problems in reflective thinking. The steps in problem-solving would be:

1. Recognition of the problem.
2. Formulation of a hypothesis for its solution.
3. Collection of data, and cautious application of the hypothesis to them.
4. Further testing of the hypothesis.
5. Application of the hypothesis, if it proves acceptable.

An aim in this method of teaching is to help pupils to build up a good method of study, and by use to make the method a habit in their thinking. This method is closely allied to what is known as creative thinking; it is only another name for the scientific method.

Arising in part out of the manual training shops, where the pupils do work having a clear and definite purpose and genuine real-life activity, and in part out of the work of the

teacher in supervised-study classes where the pupils are carried along to some definite goal by means of directed learning, we have recently heard much of the Project Method as a new type of teaching technique. Project problems, in distinction from those of the problem-solving type, are those that are real, material, and practical, and which involve the setting-up of a so-called "project" for their solution. A project is thus "a problematic act carried to completion in its natural setting" — a definite and "a clearly purposeful task" that to a pupil seems worth while. The steps in the project method are:

1. Formulation of the problem.
2. Guesses for its solution.
3. Drawing up a plan for its solution, stating:
   (*a*) What must be known or found out.
   (*b*) What must be done to test the suggested solution.
4. Making a record of what is done and found out.
5. Definite statement of solution found, and of principles or processes learned in its solution.

The last step is important to bring the activity involved to an educative conclusion. For certain types of learning it is a useful method to employ, but it has distinct limitations, and an attempt to use it widely may lead to much waste of time and effort. Its best use is in English, civics, science teaching, and in constructive work. It is especially useful in agriculture and shop work.

The discussion method, and the socialized recitation. Teachers have for long been trained in the use of a topical method in the conduct of recitations, and some school boards have, by rule, forbidden teachers to use a textbook in the conduct of lessons in such subjects as geography and history. The aim has been to try to get the teachers away from the testing conception of the recitation period, and to change it to a discussion and thinking period. Too often it is a lecture

period, with the teacher doing the work and the class as passive listeners. Whatever the merit of the lecture method with older students, it is only occasionally of use with children. In the discussion type of lesson, following a topical outline or using the open textbook, the aim is to secure thinking on the part of the pupils, and teaching instead of testing on the part of the teacher. The purpose is to lead to judgment-forming, and to the shaping of opinions and attitudes on the part of the pupils. The method calls for skillful questioning on the part of the teacher, using queries of a thought-provoking type. In the hands of a teacher lacking skill the lesson is likely to degenerate into desultory discussion and to get nowhere. This method is a better test of the ability of the teacher to question wisely and well than is any other method we have so far considered.

Carried a little further, so that the pupils rather than the teacher do the work, but still under the direction and guidance of the teacher, we get what has become known as the socialized recitation. Under this form the pupils organize into a program committee, with a chairman, and the teacher's task now is to plan the work and guide it without herself being in the foreground, and to coöperate with the class rather than dominate it in the conduct of the work. From the pupils' side the work calls for organization, planning, presiding, conducting, contributing, challenging, approving, and summarizing. The values in the use of this plan lie in giving a social motive to the work of the pupils, the teaching of proper social attitudes, the development of group coöperation and consciousness, training in initiative and leadership, and a keen motivation of work. Like all advanced methods it calls for skillful leadership, and its dangers lie in a fixed procedure, wasted effort, and lack of accomplishment. It is a useful method in the hands of an able teacher, but it is one that can easily be overdone and overworked.

The lesson for appreciation. At times, in some subjects, the call comes for a lesson the aim of which is not learning, but appreciation, enjoyment, admiration, and sympathy. Attitudes rather than ideas are now to be the outcome of the teaching. The appeal is to be to the feelings and the emotions, rather than to the intellect. It is in the teaching of literature that this method has its chief application, and its aims here are to lead the pupils to a love of literature and books, to a valuation of noble thinking, to an understanding of human emotions, and an awakening of ideals and ambitions. In the upper grades and the high school the purpose may be to appreciate the thought, the feeling, or the technique of the author. The dangers in the use of this method are sentimentality on the one hand, and formal study on the other. Such instruction calls for the skillful touch of the artist teacher.

Reviews and drills. The study of psychology as applied to teaching must of necessity give emphasis to the importance of purposeful reviews and drills in fixing skills and knowledge. Every teacher has to face the question of how best to organize these periods, and what to expect as the outcome of such instruction.

The purposes to be served by a review lesson are the selection and the fixing of the more important points in the study that has preceded, a reorganization and revaluation of what has been learned, and the foundation of a basis, by recall, for a further extension of one's knowledge of the subject. The rightly motivated review lesson should not be thought of at all as a test or examination, or as a preparation for such, though it may be so used. Psychology emphasizes the importance of short and frequent reviews of knowledge, and a "re-view" of what is known forms a necessary step in the inductive-deductive technique. A part of the conduct of successful teaching consists in the ability to organize good

review lessons, tests that search out understanding, and the training of pupils in review procedures and the mastery of knowledge.

Similarly, applied psychology has emphasized the importance of drill in the learning of any skill and the fixing of all habits. This applies equally to physical or motor skills, such as are learned in physical or manual training; to fact associations or memorized subject-matter, as important dates, names of capitals, or verb forms; and to mental-method skills, such as are found in the mastery of oral or silent reading.

The pedagogical laws of habit formation are of aid to the teacher here. These emphasize the importance of starting right, giving careful attention to each step in the process in the initial stages of learning any new thing, allowing no exceptions in practice, and fixation by "over-learning." Psychology also tells the teacher to plan her drill work carefully in advance, to select worth-while materials for drill purposes, to motivate the drill work by approaching the old subject from new angles and with new problems, not to follow uniform procedures, and to keep before the pupil a conception of personal efficiency to help him motivate his reviews and drills. A successful teacher uses much ingenuity and much good technique in these reviews and drills, as well as in her work of teaching.

The transfer of training. One of the important problems connected with the teaching process relates to the possibility of the training, given in learning one thing, being carried over to the learning of a somewhat related thing. Stated another way, is the practice involved in learning one thing of use only in learning that one thing, or is it to some extent general learning, and does the learning of one thing make the learning of a somewhat related thing easier later on? Half a century ago this was a generally accepted doc-

trine, and the study of Latin or mathematics was in part defended on the theory that it disciplined the mind, and prepared one for success in life in many and quite different ways later on. In the reaction which later took place against this conception, known as the "doctrine of formal discipline," the idea of a transfer of training was rejected almost entirely, and in its place came the conception that learning consisted in learning a large number of quite specific things, and processes, and skills. Recently a number of experiments have tended to show that there is a middle ground, and that teaching can be so conducted as to lead to a much greater transfer of training than was formerly thought possible.

The theory most commonly accepted to-day is that the transfer, so far as transfer takes place, is of what are known as "identical elements." This means that there are often identical elements or procedures or aims or skills involved in learning different things, and that, in learning any one thing, the learning of somewhat related things is made easier by reason of the transfer of what has been learned to the same elements in the new thing, thus reducing the time required to learn the second thing. Applied to other similar things, the process is cumulative. There seems now to be little doubt but that a certain transfer of training is possible. Just what the common elements that may be transferred are is not so clear. They are probably much more numerous in learning mechanical and physical skills than in the higher thought-processes.

In the present state of the controversy it is probably safest for the teacher to teach each subject and part of a subject with all the skill she possesses, with the certainty that whatever transfer is possible will be in the best condition to take place when the original teaching has been good, and then to keep an open eye, in further teaching, for the calling-up and

use of whatever seem to be identical elements. This much seems certain — that a larger transfer of training is possible than formerly seemed to be the case, and that the transfer is larger with bright pupils than with the slower ones.

The scope of this chapter. This chapter has dealt with the technique of teaching, and has tried to show how thoroughly good teaching, though itself an art, is nevertheless based on the psychology of the learning process itself. It has also described briefly the important methods of teaching which are employed in our schools, and has pointed out something as to their place and usefulness. Our best teachers use not one but many methods — one here and another there, one to-day and another to-morrow — and probably no evidence of progressiveness in a teacher is of more importance than the evidence of a desire to experiment with and learn to use many different teaching methods.

The contents of this chapter belong to the field covered in a course in *Methods of Teaching*, or *General Methods*, as it is often called. Such courses are given in all teacher-training institutions, their aim being to give to prospective teachers an introduction to the use of the different methods of instruction, and to reveal the scientific basis for each. The course is often called *General Methods* to distinguish it from the many *Special Methods* courses often given in teacher-training institutions, such as special methods in teaching arithmetic, or English, or science.

At the beginning of the chapter we also touched briefly on school organization and management, a subject taught in the training schools, either in connection with the practice teaching, the methods courses, or as a separate short course under the general title of *School Management*.

QUESTIONS FOR CLASS DISCUSSION

1. Contrast the science and the art elements in some particular example of teaching.
2. Show how much of the work of the school superintendent has as its ultimate purpose the bringing of teacher and pupil together under conditions more advantageous for instruction.
3. Give an illustration of a wrong "routine procedure" that effects teaching efficiency, and show how to correct it.
4. Show why it is economical, to both teacher and pupils, to develop fixed ways in management procedures throughout a school, and good psychology as well.
5. Show that school supervision which allows general textbook teaching is relatively poor supervision, and that it tends to perpetuate a low grade of teaching efficiency.
6. Show that skill in teaching is in large part skill in questioning, and that skill in questioning goes back to sound knowledge of both subject-matter and children.
7. Show that the skill of a teacher in questioning is, or is not, proportional to the number of pupils in the class whose attention she challenges by her queries.
8. Show the close connection between teacher assignment and student preparation, and the importance of the assignment as a part of the teaching process.
9. Would you say that learning how to study is more important than the learning?
10. Illustrate problem-solving, and show the importance of this type of training for pupils.
11. Remembering that there are large individual differences in children, show how a socialized recitation in problem-solving offers advantages over the study of the same problem without the socialized procedure.
12. A football player who had been only an indifferent success as a player made a great success as a football coach. In another instance, a highly successful football captain, elected as a coach, failed utterly to produce a good team. Explain.

EXERCISES AND PROBLEMS

1. Draw up a plan for teaching any topic or subject that will call for good teaching method on the part of the teacher and at the same time make the best possible use of the textbook the pupil has.
2. Plan and outline the procedure for an inductive-deductive lesson intended to teach the effect of the invention of the cotton gin on the growing trouble between the North and the South that eventually led to the Civil War.

3. Work out a lesson in problem-solving, say in science, using the steps given on page 242.
4. Work out the steps for the carrying out of some teaching project, say in agriculture, following the steps given on page 243.
5. Take Holmes's poem "Old Ironsides." Show how you would use this, with a seventh or eighth grade class, to give a lesson in appreciation.
6. Make a list of the habits, attitudes, and skills that might reasonably be expected to be the proper "outcomes" of good teaching.

COLLATERAL READING

Bagley, Wm. C., and Keith, J. A. H. *An Introduction to Teaching*, chap. IX.

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*Sears, J. B. *Classroom Organization and Control.* (300 pp.)

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*Strayer, G. D. *A Brief Course in the Teaching Process.* (315 pp.)

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CHAPTER XIV

SCIENTIFIC SCHOOL CLASSIFICATION

Our knowledge as to individual differences. In Chapter XI, when studying about the pupils and their needs, we learned of the marked differences — physiological, developmental, and mental — that exist among pupils. The problem of the acceleration and retardation of children in our schools was also considered briefly, and the amount and nature of these factors was shown by two figures (15 and 16), representing actual school conditions. The difference between physiological and chronological, and between mental and chronological ages was also pointed out, and the uses that might be made of the new tool — intelligence tests in school classification — were briefly described. The important conceptions presented in Chapter XI were first, that large individual differences exist among pupils in various directions; and second, that these individual differences in native mental ability have only recently become measurable.

In this chapter we desire to pursue these ideas further, and to show their importance in the work of scientific school classification; to describe briefly another recently evolved type of tests used to measure other kinds of pupil ability; and to point the application of all these different methods of measuring to the problem of classifying, teaching, and promoting the pupils in our schools.

Homogeneous working groups. What every school principal desires to give to every teacher is as homogeneous a working group of pupils as can be done. What is wanted is a fair balance between the work to be done, as represented by the course of study, and the capacity of the pupils to do it.

Every pupil, we now know, has a certain inherited capacity for doing, and this inherited capacity (I.Q.) we know, from intelligence testing, varies widely with different pupils of the same age groups. Still more, each pupil has a certain ability to do, lower than his inherited capacity, and this also varies with pupils of the same inherited capacity. This latter difference is due to the effects of or the lack of certain specific training in skills and learning responses which the pupils have or have not had. There are, still further, other differences in the performances of pupils of the same inherited or trained capacity, which often cause them to give results much lower than their actual ability to do. These differences in performance may be due to low physical tone, bad environmental factors in the school itself, lack of proper intellectual stimulus coming from the teacher, sheer laziness, or other somewhat similar causes.

The problem of the school then, is first to diminish, as much as can be done, all differences in ability to do traceable to other than variations in inherited capacity. This calls for a good health service, good school buildings and sanitary conditions, careful attention to the details of school organization and management, as good teaching as can be secured from the teachers employed, and intelligent and helpful school supervision by principals and superintendent — all with a view to bringing actual accomplishment as nearly up to possible accomplishment as can be done. The second phase of the problem is to sort the pupils, on the basis of ability to do, into working groups which shall be as homogeneous as possible, so that the work of the teachers may be made as promising in outlook as can be done. The ability of a teacher to render good service to such an ill-assorted group of pupils as is shown in Figure 16 (page 195) is much less than what it would be if the half dozen badly retarded pupils were removed to other classes. The class

would be a still more homogeneous working group if the two accelerated pupils, at the other end of the scale, were promoted to a higher class. Even a few ill-assorted cases, at either end of the scale, interfere with the proper progress of a working group.

Absolute uniformity in sorting is, of course, an impossibility anywhere, and even approximate uniformity is impossible in small schools located in communities composed of diverse population groups. All attempts to secure approximately homogeneous working groups for the teachers are limited by the character of the school population itself, by the number of classes into which any school may be divided, by the kind of grading and promotional plan in use, and by the scientific character of the tools employed to determine how to sort the pupils. A small school, obviously, must have more mixed classes than a large school, and a school that does not employ scientific testing and measuring devices cannot obtain as intelligent a sorting of pupils as can a school that does.

Type plans of grouping and grading. With us the graded elementary school goes back to the middle of the nineteenth century, though it was not until the seventies and the eighties that the grading of schools into year-grades became common. Rural schools were graded still later. Early grading divided the pupils into year-grades, and assumed that the pupils of each year-grade were much alike in needs and abilities. Later the larger cities began to divide each year-grade into half-year grades, and this, too, has been extended to schools wherever enough pupils are gathered together to make such grading possible.

The next step in the evolution of the grading process was to make some form of provision whereby pupils able to make faster progress might move along at a more rapid rate. This was at first done by special or extra promotions — a plan

still in general use for dealing with special cases. Still later some form of a two-track grading plan, or parallel course of study plan was worked out, so that the pupils of different native inheritance, or working capacity, or diligence, might not only make progress through the schools at varying rates of speed, but might also change without loss from one track or course to the other, and *vice versa*, at certain definite stations along the way. A common form of such a two-track plan is shown in Figure 21, with the explanation of its use printed underneath.

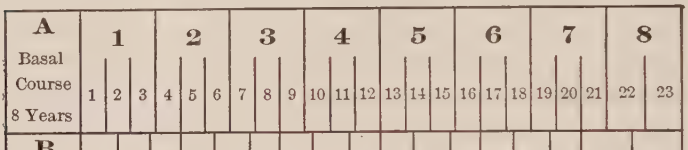

FIG. 21. THE PARALLEL-COURSE PLAN

Two parallel elementary-school courses, with one third more work assigned for each year in Course B than in Course A. Pupils may be transferred from one course to the other at any of the five main junction points, or, with slight coaching or slight loss, at ten other points.

Another method of handling the problem of individual differences in pupils, though a more uncommon one and a more difficult one to handle, except in large schools, is the plan whereby all pupils progress at the same rate through the first six grades at least, but where the amount of work expected of pupils varies. This plan virtually calls for three courses of study — one for the slow-moving group, and involving only minimum essentials; another for the great mass of average pupils, and involving average work; and still another for the rapid-moving group, and involving extra work and maximum course of study requirements. This

plan is usually known as the differentiated course of study plan. Figure 27, in the chapter which follows, illustrates this plan. In the junior and senior high-school organizations pupils are promoted by subjects, rather than by grades, and the load can there be adjusted by varying the amount of work attempted.

Special promotions. In many school systems neither parallel nor differentiated courses of study are to be found, yet the classes contain the same assortment of over-age, superior, average, dull, and foreign-born children, as well as some moral and disciplinary cases. The best that these systems provide for handling these diverse types of pupils is a plan for semi-annual promotions, and all pupil adjustments must be made through the means of extra helping of pupils and special and irregular promotions.

The extra helping of pupils has the double purpose in mind of preventing failures on the part of those at the lower end of the scale, and of preparing those at the upper end for advancement by a special or extra promotion. In large schools, where a helping or "ungraded" teacher is employed to give such extra assistance, the task is relatively simple, but most schools do not have such a person. In such cases the extra help must come from the principal and the classroom teachers. By giving attention to all pupils who are falling behind, and by stimulating acceleration in the school, much non-promotion can be prevented and often a new spirit can be put into a school.

Such work calls for personal conferences with each pupil who is either in danger of failing in promotion or who ought to be pushed ahead by an extra promotion, and usually the parents need to be taken into the conference and their help enlisted. Extra attention, both in school and at home, is given to the subjects in which the pupil needs assistance, and daily and weekly conferences as to progress are required.

The main problem is to decrease the "flunkage," and the consequent discouragement that comes from failure. The harmful effect of failure in promotion on pupils is so great that it is often said that a pupil twice-failed is well prepared for failure in life. The effect on the pupils of "speeding-up" a school is good; it gives new spirit to the school, stimulates ambition, and brings out leadership. Once the teachers, too, catch a vision of the possibilities of work with pupils, it leads them to a new kind of study of both their children and the subject-matter.

Irregular promotions and coaching. The special or irregular promotion of pupils also has an important place in school administration. Pupils whom the teacher considers are unquestionably ready for promotion ought to go ahead, and some of whom the teacher is doubtful should be advanced by the principal. Teachers are particularly likely to err in judgment in the case of bright pupils who are small in size or under-age. Ability to do the work of the grade ahead, rather than marks or the completion of work, ought to be the main criterion. With pupils of average intelligence, a year of advanced work is worth more than repeating a grade, and even with pupils of low intellect it is often better to promote them and not expect full work of them than to hold them back and increase their discouragement. With over-age and over-size pupils, those of fair intelligence usually improve in ability to do when put ahead with pupils more nearly their own age and size. Troublesome bright pupils almost always do better when promoted to a grade where they have to work harder. In cases of special promotion it is wise to place emphasis on good conduct, good citizenship, punctuality, and faithful attention to duty, and to give some prominence to these by way of stimulating ambition and worthy citizenship.

The coaching of pupils, together with special and ir-

regular promotions, are means for securing more homogeneous working groups for teachers where better means are not at hand. As a plan it has many good features and many limitations, and often it does not give the needed relief. Not infrequently the pupils are passed along when what they need is special help, and often special types of school instruction. In consequence they get beyond their depth, become disheartened, and tend to truancy and early dropping out of school. Such pupils need more scientific classification, and the help that only special teachers and special rooms can give.

Scientific classification on the basis of intelligence testing. With the perfection of intelligence tests, all within the past decade and a half, a new tool has been given school authorities for the more scientific sorting of pupils into homogeneous working groups. While special plans for grading, and special help and promotions will alike prove useful to teachers and principals, the most important single tool at their command, after all, is the intelligence test. Alone, it is by no means an infallible indication as to action to be taken, but used in connection with other evidence it is the best of all indicative tests and measures of ability to do. It is on the basis of intellectual capacity, rather than upon age or size or effort, or even the judgment of teachers, that the placement and rate of advancement of individual pupils must largely be determined.

The important thing to do for a pupil is so to place him that his ability to work will be most deeply challenged. If advancing him seems the thing to do, what he loses by skipping is frequently more than compensated for by placing him where he will work to better advantage. All that we know as to the psychology of the learning process tells us that it is training in skills, perceptual learning, associative learning, and problem-solving that is important — not the "covering" of the factual side of a course of study.

As was pointed out in Chapter XI (page 198), the educational significance of this new tool — intelligence testing — is very large, and problems of grading and promotion acquire a new meaning in the light of its use. In fact, so great has been the flood of light thrown over problems of pupil ability and adjustment by intelligence testing that we may well say that the problem now is, not how to find out the needs of pupils, but how to obtain means for dealing with them, once their needs have been diagnosed. Our knowledge as to needs has outrun the ability of our administrative machinery and instructional methods to meet the problem.

Further aid in the scientific organization of school work. Within the past decade and a half, also, other entirely new means of attacking the problem of pupil classification on the basis of ability have been given us through the development of what are known as educational tests and measures of accomplishment. These are commonly referred to as the standard, or scientific tests. Up to the present time, some three hundred of these tests have been evolved and more or less standardized, and more are in the process of construction. Of this number, at least twenty-five to thirty are of enough importance for the work of the school that a teacher should know something about them and their use, and a principal should be able to use at least this number accurately. The results obtained from their use have been so important that they bid fair to change completely the nature of schoolroom supervision by putting scientific accuracy in the place of what was often only guesswork.

Through them the principal is able to substitute measurable and standardized results for personal opinion, and to secure clear and uncontestable records of the achievements of the pupils and the teachers in his school. From an examination of the statistical or charted results, a principal can tell, almost at a glance, whether pupils or rooms are

making proper progress; when any group has made all desirable progress and should advance; how well a working group is suited to continue working together; whether instruction is being directed to what are the weak points; the location of teachers who are carrying a heavy load or who need help; in what rooms the load of the teacher is not properly adjusted; and whether the teachers are getting out of the pupils as much as they are capable of doing. No tools developed within the past quarter-century have meant so much for the scientific organization of school instruction, and the proper progress of pupils through the schools, as have these intelligence and educational tests and measures.

The standard educational tests. The first of the tests worked out were in the fundamental tool subjects — writing, spelling, arithmetic, and language — and these have been used long enough and in a large enough number of places that they have become standardized as to results. For all the older and better tests, standard scores, or norms, have been built up, so that the accomplishments of any grade in any school can be measured objectively and compared with the norm for such grade and work done in schools generally. As an example of such scores, the standards for rate and quality in handwriting for each grade (grade norms), as measured by the Ayres Writing Scale, are given as shown in Figure 22. Very good tests,

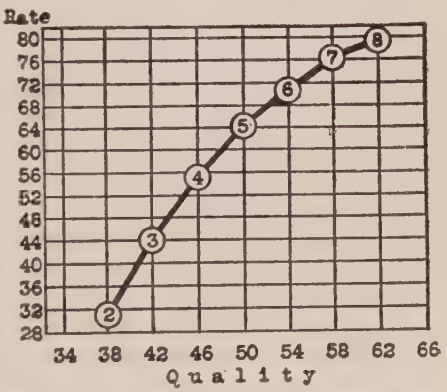

FIG. 22. GRADE NORMS FOR THE AYRES HANDWRITING SCALE

reasonably well standardized, now exist in spelling, handwriting, arithmetic, silent and oral reading, composition, English usage, language work, geography, history, drawing, and music, for the subjects of the elementary school, and for most of the subjects of the secondary school as well. We also have a few good combination tests, or batteries of tests, which test a number of things instead of only one. Of these, the Illinois Examination and the Stanford Achievement Tests are the most important. For a guide to these, their usefulness, and their grade norms, the reader is referred to such books as Hines's *Guide to Educational Measurements* (1923), or to the new edition (1924) of Monroe, DeVoss, and Kelly's *Educational Tests and Measurements.*

The course of study for a school system can at best give but general directions as to what teachers are to do, and the directions are usually stated in terms of textbooks, subject-matter acquirements, or of types of training to be given. Certain definite information is to be imparted — to read, write, spell, cipher, think, compose, and learn historical and geographical facts; certain types of instruction are indicated to be used — drill work, reasoning exercises, directed-study, lessons in appreciation and problem-solving; and certain aims are set forth as important — civic training, moral education, and health habits. These, however, are at best quite general specifications, and the same work naturally is indicated to be done with all pupils, regardless of individual differences and needs. The use of the standard tests and an interpretation of the scores obtained call the attention of the teachers to other aspects of the work of instruction — the results secured rather than the subject-matter covered; the needs of the pupils, rather than the contents of the textbooks; the requirements of individual pupils, as well as of the class as a whole; and specific items and skills in teaching, rather than vague general aims.

Diagnostic value of the standard tests. One of the chief gains from the use of the standard tests in a school is the ability, from an examination of the resulting scores, to diagnose pupil difficulties, and to prescribe remedial procedures. In handwriting, spelling, reading, composition, arithmetic, and other subjects, an examination of results, either of a class or of the individual pupils, will usually reveal the defects in training and the points needing emphasis in further instruction. This is as true for the teacher in the one-room rural school as for the teacher in a large city graded school.

For example, a handwriting test of a class may reveal undue perfection of letter-form with too little speed, or too much speed coupled with poor legibility. A reading test, similarly, may show good oral reading and but little thought-getting ability; the pronunciation may be good, but the comprehension may be low. On the other hand, some few pupils may be just the opposite of the general average of the class, or wide individual variation in ability may be shown. A spelling test may reveal all sorts of conditions and needs. In a school having differentiated courses of study (page 254)

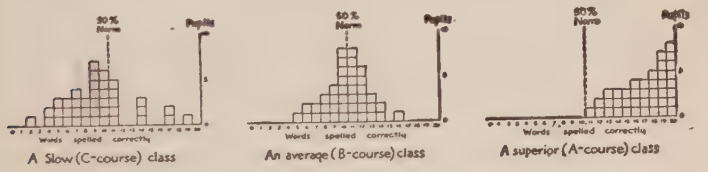

FIG. 23. RESULTS OF A SPELLING TEST WITH THREE FIFTH-GRADE CLASSES

Based on words from the fifty per cent column of the Ashbaugh Iowa Spelling Scale. Three entirely different spelling situations are here shown.

and three corresponding classes, a spelling test with three fifth-grade classes, using the Ashbaugh Iowa Spelling Scale, gave the results shown in Figure 23. Each square in this figure represents one pupil making that score. Here three

quite different situations are shown by the test, and different methods of handling the instruction are called for. The C-course class needs primary methods — visualizing, pronouncing, and written work; the A-course-class teacher can dispense with this type of instruction entirely, shorten the spelling time, and do oral work; while the B-course class will do best by using a combination of both types of work.

Determining progress and pupil needs. The standard tests are also of use in revealing objectively to teachers and principals not only the position of a pupil or a class at any particular time, but also the degree of progress made by a pupil or a class in any definite period of time. This use of the standard tests is well shown by Figure 24, which gives

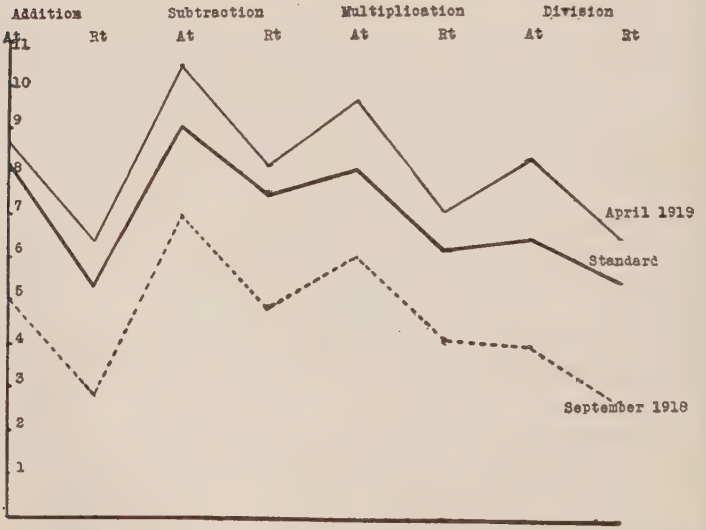

FIG. 24. MEDIAN SCORES OF A SIXTH-GRADE CLASS IN SEPTEMBER, AND THE FOLLOWING APRIL, AS MEASURED BY THE COURTIS STANDARD RESEARCH TESTS IN ARITHMETIC, SERIES B

(After Monroe.)

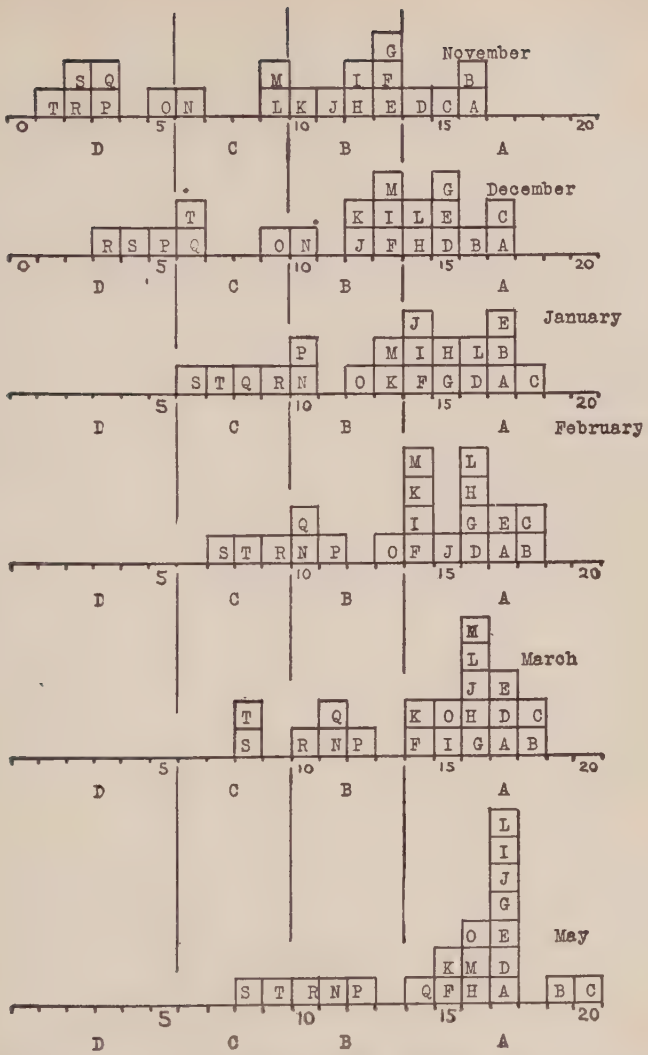

FIG. 25. SHOWING IMPROVEMENT IN ORAL-READING RATE OF TWENTY FOURTH-GRADE PUPILS WHEN INDIVIDUAL AND GROUP INSTRUCTION WAS USED

Rate expressed in lines per minute. (After Zirbes.)

the status of a sixth-grade class at the opening of school in September, in the matter of both speed and accuracy in the four fundamental operations in arithmetic, as measured by the Courtis Standard Arithmetic Tests, and the result of seven months' work with this class by the teacher. By means of the tests the teacher knew definitely that the class entering her room in September was deficient, the amount they were below the grade-norm, and the amount they ought to gain. In April, use of the same test revealed that the teacher had more than brought up the class.

One further illustration will be given to show how the standard tests may be used to diagnose individual abilities and needs, and then as a guide in applying remedial instruction. Figure 25 shows the results with a class of twenty in oral reading, as measured by rate. The diagnostic test in November showed a reading range from one to sixteen lines per minute for the different pupils. By careful class drill on punctuation, enunciation, eye-movements and focusing, attention to hard and mispronounced words, accuracy in seeing and pronouncing, voice work and expression, and, for a few, breathing exercises and exercises in articulation, by May the results were as shown on the bottom line. This work is an example of good class teaching, the teacher working in the light of real knowledge as to conditions and needs.

Intelligence and accomplishment. While the standard tests that test accomplishment in studies (achievement tests) do have, as has been shown, large diagnostic value, there are many times when they fail to tell the whole story. For example, a fifth-grade class was recently described in which a good teacher, after hard work, was unable to bring the class up to anything like standard in their ability to read. On applying an intelligence test to the class it was found to show the following situation:

Pupils		I.Q.
Feeble-minded	7	Below 60
Border-line cases	14	60– 74
Dull and slow	10	75– 84
Normal pupils	10	85–114

A re-study of the achievements of the class, as shown by the reading tests, with their low mental ages now taken into consideration, proved that the teacher had, after all, done excellent work, the low mental age and the size of the class (41) considered. She had attempted the impossible, and had done as well as any teacher could.

Such cases as the one just described bring out forcibly the desirability of having some combined type of tests. This the *Illinois Examination*, which combines tests of intelligence with ability in silent reading and arithmetic, and is designed for use with grades three to eight, and the *Stanford Achievement Tests*, which combine tests of information, knowledge, and ability, and are designed for use with grades two to eight, try to provide.

A still further attempt to combine the different factors has been made in the recent development of what has been called the *Accomplishment Quotient* (A.Q.). If this tool is perfected and made generally usable it promises to be of large service in the classifying and teaching of pupils. In simple terms, the A.Q. attempts to tell us what any pupil is actually doing — in terms of his intellectual ability to do. From it we may find that a pupil doing good work is, after all, due to high intelligence, working to only eighty per cent of his capacity; while another pupil, doing only about eighty per cent of what an average pupil of his age and grade ought to be doing, is, due to his low intelligence score, actually working up to one hundred per cent of his ability to do. Had a calculation of A.Q.'s been applied to the fifth-grade class in reading, described above, which the teacher tried to bring

up to the grade-norm and failed in doing, it might have been found that with many of the class the teacher actually obtained accomplishment results of one hundred per cent or even slightly over, and that the work represented after all a high grade of instructional skill. As a means for setting up incentives and avoiding discouragement with pupils, the use of the accomplishment quotient offers large possibilities. It also promises to give us a most useful scientific measuring stick for classifying pupils into groups, where they may be able to attain to maximum possible accomplishment.

Significance of the new movement. With the scales so far evolved, teachers can be taught to test their own work, and in some cases the pupils can as well. This means measuring accomplishment in terms of what good teachers and schools elsewhere are doing. It also means somewhat of a shifting of emphasis from methods, to accomplishments through the use of methods. The purpose in the use of these tests is to set up concise and definite statements of what are the aims and the attainable goals in certain types of instruction, to know how much ought to be accomplished in each school grade and with each type of pupil, and to determine when this point has been reached. Their use will prevent waste by over-teaching or by under-teaching, and the results of different types of teaching procedure may be evaluated. Combined with intelligence testing, their use means that teachers will not be expected to do the impossible. For the teacher, then, their employment gives greater definiteness in teaching, for the pupil better teaching procedures, and for the parent and taxpayer positive evidence that good teaching has been done.

For the principal and superintendent the use of these tests means the transformation of school supervision from mere visitation and a guess-work type of advice to scientific accuracy. Where once the supervisor passed a general

estimate on the results of instruction, based on his "experience," he to-day is able to evaluate work in terms of the best standards for similar work done in the whole country, and to outline remedial procedures in the light of the best psychological knowledge as to the learning process. Teaching procedures, methods of work, differentiations in pupil abilities, the classification of pupils, parellel courses of study, and new types of schools and instruction, all acquire new meaning in terms of the new knowledge given us by the use of the standard tests.

The tests will not, of course, do away with the need for professional skill, enthusiasm, tact, kindness, good judgment, or a number of other desirable qualities on the part of teachers. There are also certain outcomes of teaching — enthusiasms, ideals, emotions, attitudes, convictions, ambitions, habits — which are very important, and which the tests do not attempt to measure or evaluate. It is probable, though, that these other outcomes will be better looked after if the purely definite and measurable outcomes of teaching are better attended to.

The tests have emphasized individual differences. One of the marked results of the testing movement has been to bring out, in new and strong relief, the wide differences in ability of individual pupils in almost every skill or type of learning to which the tests have been applied. Figure 23, showing the individual results in a spelling test, and Figure 25, showing the individual results in reading ability, illustrate these differences well. These same differences exist among human beings generally in almost every measurable skill and ability.

In a way this fact has for long been recognized, and the instruction in our schools has for long tried to even up abilities, in so far as this could be done. Supervised study as a teaching device, and the individual instruction of pupils, have

CORRELATION

OF

CHRONOLOGICAL, MENTAL, AND SCHOOL AGE

Name..... Date.....

Chronological Age	I.Q.	Mental Age	School Grade for present Chron. Age	Reading	Arithmetic	Spelling	Writing	Geography	Language
16	.63	16	H.S. II						
15		15	H.S. I						
14		14	J.H.S.						
13		13	VIII						
12		12	VII						
11		11	VI						
10		10	V						
9		9	IV						
8		8	III						
7		7	II						
6		6	I						
5		5							
4		4							
3		3							
2		2							
1		1							

FIG. 26. A BOY IN NEED OF SPECIAL-CLASS INSTRUCTION

A pupil is rarely able to do school work even one grade above that corresponding to his mental age. This boy was fifteen years old. If he had possessed normal intelligence for his age, he would have been in first-year high school. He was found in the fourth grade where, as tests showed, his mental age (nine years) would place him. This was as high as he was able to work successfully, except in reading. (From *Mental Hygiene*, for July, 1922, "Inauguration of a State-Wide Public-School Mental Clinic in Massachusetts," by Walter E. Fernald, M.D., Superintendent Massachusetts School for Feeble-Minded.)

alike aimed to adjust teaching to differences in capacity to do and to learn. In such remedial procedures as were described in Figure 25 for improving reading ability, we have tried to train our teachers in methods of bringing up those at the lower end of the scale, and thus decrease retardation and increase the promotional rate. The new tests have been very useful here in revealing the amount and the location of needed training. So impressed have some educators been by the individual differences revealed, that, in a few school systems, an attempt has been made to individualize the instruction for all pupils, so as to carry all along at a more normal rate of progress.

The use of the intelligence and subject-matter tests has shown us the great necessity of adapting school work more closely to the individual differences of our pupils, if really satisfactory results are to be obtained. All that we have so far done is good, but it has not reached all cases. To-day we see clearly, in the light of what testing has revealed, the need not only for such aids as individual instruction, supervised study, remedial procedures, and parallel and differentiated courses of study, but also for special types of classes and schools if we are to care properly for the marked differences in ability to do and to learn which testing has so clearly shown. In consequence, even small school systems to-day are coming to have a few special classes — disciplinary, ungraded, sub-normal; while large school systems are being provided with numbers of special teachers and rooms and schools, all with the purpose of better classifying the pupils in the schools, and of better adapting the instruction to be given to the differing needs and abilities of the pupils. The day of the uniform graded school system has gone forever, and probably one of the important tasks of the next ten or twenty years will be to secure, generally, the special classes and teachers and schools needed to bring our educational

practice up to our scientific knowledge as to what ought to be done for our children.

The scope of this chapter. This chapter has related to the problem of individual differences in pupils, and the attempts of the school to determine these differences and to classify the pupils according to their needs. Starting with age-groups, semi-annual promotions, and special promotions as means for improving pupil classification, and parallel and differentiated courses of study to enable us to adjust loads better to the ability of pupils to carry them, we come finally to the new testing procedures for determining needs and abilities.

Once intelligence and educational tests are perfected and applied to the problem, a new light is thrown over the whole process of pupil classification. Not only are the differences in pupil ability greater than we had before known, but we find that dealing with them calls for a large number of different remedial procedures, and different types of classes, and teachers, and schools, and courses. If we are to train each pupil to use his native endowment in the best possible manner, and to prepare him for the largest usefulness in life, then instruction must be adjusted to his ability to learn and to do.

Training in determining pupil abilities and prescribing remedial procedures belongs to such courses as *Intelligence Testing*, *Educational Tests and Measurements*, and *School Supervision*. The first and the last are more advanced courses, usually given in universities, but the study of *Educational Tests and Measurements*, with some elementary study of intelligence testing, statistics, and the recording of results in graphic form, represents a type of work now generally taught in normal schools and teachers colleges, and more and more being required of all prospective teachers. This work represents the scientific side of education, as distinct from the teaching art.

QUESTIONS FOR CLASS DISCUSSION

1. Explain what you understand by homogeneous working groups, parallel courses of study, differentiated courses of study, ungraded teacher, grade norm, and diagnosis.
2. Illustrate how ability to do may be nearly up to or much below inherited capacity, due to the effects of or lack of training.
3. Suppose you have a pupil in class whose work is much below his ability to do. What might you do about the case, under different revealed reasons?
4. Show the importance, for instruction and accomplishment, of good building and schoolroom supervision on the part of a principal. Mention what he can do to bring pupil accomplishment and capacity to do nearer together.
5. Show how diverse population groups increase the difficulties of grading pupils.
6. Show how the prevention of promotional failure and the stimulation of acceleration might put a new spirit into a school. How could these stimulating influences be obtained in a differentiated course of study school?
7. It is often said that it is the bright and able pupils who are most retarded in school. How would you explain this?
8. What is meant by the statement that "our knowledge as to pupil needs has recently outrun the ability of our administrative machinery to meet the problem"?
9. Distinguish between "subjective" and "objective" in testing and rating accomplishment.
10. Show the value of test results in the different school subjects to a teacher who is taking charge of a new class, by way of helping her to balance her effort and emphasis in teaching.
11. Show how a bright pupil might stand near the head of his class, and yet never learn what capacity effort is. How would you improve conditions for such a pupil?
12. How would it be possible for a teacher to obtain *above* 100 per cent in accomplishment, as determined by calculating the A.Q.?
13. Show how the testing and measuring movement has done much to make education a science, and school supervision a professional service.
14. Show how the old school instruction tried to iron out differences in ability, while the newer instruction recognizes the differences and tries to deal with them scientifically.

EXERCISES AND PROBLEMS

1. Arrange in historical order, as well as you can after reading this chapter, the different steps in grading and classifying pupils, beginning with the room where pupils of all ages were taught by one teacher, up to the present practices in our best city schools.

2. Examine a standard test in any subject, and read up on how to give it, and its grade norms, sufficiently to be able to describe it.
3. Taking the fourth sentence under the heading of "Significance of the movement," on page 266, which states the purposes in the use of tests, as a basis, and show its application to instruction in arithmetic, spelling, or handwriting.
4. Draw up a list, in parallel columns, of the measurable and the non-measurable outcomes of teaching.
5. Observe a class of pupils under instruction, preferably in the lower grades, for a number of lessons, and note the apparent differences in learning ability of the pupils. Classify them as to learning ability, and see if ability varies in different subjects and on different days. If the teacher is willing to do so, have her check your estimates; if her ratings vary from yours, try to see where and why you made your mistakes.
6. If the results of the test of some class in some school subject are available (School Survey Reports usually contain such), study them, and try to prescribe needed remedial instruction.

COLLATERAL READING

*Brooks, S. S. *Improving Schools by Standard Tests.* (278 pp.)

Burton, W. H. *Supervision and the Improvement of Teaching*, chap. XIII.

*Dickson, V. E. *Mental Tests and the Classroom Teacher*, chap. II.

*Haggerty, M. E. "The Use of Educational Measurements"; in *School and Society*, vol. IV, pp. 761–72.

*Hines, H. C. *A Guide to Educational Measurements.* (270 pp.)

*Monroe, W. S. *Measuring the Results of Teaching.* (297 pp.)

*Monroe, W. S., DeVoss, J. C., and Kelly, F. J. *Educational Tests and Measurements.* Rev. ed., 1924. (521 pp.)

Paulu, E. M. *Diagnostic Testing and Remedial Teaching.*

Rugg, H. O. *Primer of Graphics and Statistics.* (142 pp.)

*Strayer, G. D., and Englehardt, N. D. *The Classroom Teacher*, chaps. IV, IX.

Stebbins, R. C. "The Accomplishment Quotient as a Means of Classification in the Lower Grades"; in *First Yearbook, Department of Elementary-School Principals*, N.E.A., 1922, pp. 33–44.

*Terman, L. M. *The Intelligence of School Children.* (313 pp.)

Thorndike, E. L. *Individuality.* (52 pp.)

*Trabue, M. R. *Measuring Results in Education.* (429 pp.)

School Surveys. See any School Survey Reports that are available, and look over chapters on "Individual Differences," "Measuring the Instruction," or similar titles. *The Boise Survey*, by J. B. Sears and Associates, is very good for this purpose.

CHAPTER XV

THE CURRICULUM AND EDUCATIONAL REORGANIZATION

Our historical evolution. In Chapter I, in tracing briefly the evolution of our school curriculum, we gave a chart (Figure 3, page 17) which showed the development in subject-matter which took place, in elementary school instruction, during the first hundred and twenty-five years of our national history. Beginning with reading, writing, spelling, arithmetic, and the Bible and Catechism in 1775, we traced the evolution of subject-matter and the change in emphasis in subjects to the complex curriculum of 1900. Excepting the more recent additions of agriculture and health instruction, and a few activities, the curriculum of 1900 contained all the elements of the elementary school course of study of to-day.

Again, in Chapter IX, we traced the changes in conception as to the purpose of the school and the nature of instruction which have taken place with us, and showed how the school, beginning with the knowledge-is-power and the disciplinary conceptions, based on a faculty psychology, has gradually been transformed into a new type of teaching institution, dominated to-day by the newer psychological and civic ideas of education as the development of individual capacity, and as a preparation for economic and social and civic usefulness. This change in conception has made of the school a new institution, even though the subjects in the elementary-school curriculum are about the same, in name, as in 1900.

Finally, we classified the subjects of the elementary school of to-day into the following organization, which we re-

produce here for the purpose of further consideration in this chapter.

Drill Subjects	Content Subjects	Expression Subjects
Reading	Geography	Kindergarten Work
Writing	History	Music
Spelling	Literature	Drawing
Language	Civic Studies	Manual Arts
Arithmetic	Manners and Conduct	Domestic Arts
	Nature Study and Science	School Gardening
	Agriculture	Vocational Subjects
	Health Work	Plays and Games
		Auditorium Activities
		Civic Activities

The order of arrangement, as was stated in Chapter I, represents not only the order of historical development, but the three great periods in our elementary-school development as well. The drill subjects, with a little fact geography and history, characterized the earlier knowledge and disciplinary school; the content subjects, excepting the last two, the changing period of development between 1860 and 1890; and the expression subjects the modern elementary school.

The high-school studies have had a somewhat similar development. As measured by first recognition for college entrance, the development of new subjects has been as follows:

Before 1800	1800 to 1850	1860 to 1875
Latin (1640)	Geography (1807)	Modern History (1869)
Greek (1640)	English Grammar (1819)	Physical Geography (1870)
Arithmetic (1745)	Algebra (1820)	English Composition (1870)
	Geometry (1844)	Physical Science (1872)
	Ancient History (1847)	English Literature (1874)
		Modern Languages (1875)

Since 1875, and especially since 1900, the addition of new subjects to the high-school course of study and their acceptance for college entrance, as well as the development of

new curricula in our high schools, has been so rapid that many colleges no longer attempt to enumerate the high-school subjects they will accept for admission. Many high schools, too, have given up all attempts to classify their numerous subjects into courses, and have instead laid off their work into such large groups as cultural, vocational, etc.; have stated common requirements for graduation — as two years of English, a year of science, etc.; and then have made the balance of their work elective. The colleges have in turn fitted their work onto that of the high school, as the high school has its work onto that of the elementary school, thus forming an open pathway — an educational ladder — extending from the kindergarten to the graduate school of the university.

The overcrowded curriculum. It will be realized that the number of hours per day that pupils spend in school is no greater now than it was a hundred and fifty years ago, though the term has of course been materially lengthened. This being the case, it will be seen that the addition of all the new subjects for study ultimately necessitated the cutting-down of the time devoted to the older subjects. This was quite possible at first, as there was much waste in the instruction of the old-time school. By securing a better-educated teacher, by giving that teacher some training in school and classroom management and the art of teaching, by class grouping instead of the wasteful individual reciting, and by improving discipline through better teaching, very material economies were made and time for the new subjects was found about as they were added.

There came a time, however, after about 1890, when the limits of this process had been reached. The problem then became one of finding something to cut out if anything more was to be added, and after about 1900, with the introduction of the new expression subjects and the marked shift in em-

phasis from the knowledge conception of education to the life-preparation conception, the problem of course-of-study elimination became quite acute. By the time another decade had passed, not only was the problem one of elimination but of the complete reorganization of the work of our schools as well. The development of intelligence testing and educational measurements, with the light these throw on the individual differences existing among school children, gave further impetus to the movement for course-of-study eliminations and educational reorganization. Since the close of the World War more attention has been given to curriculum and school reorganization than to all other phases of the educational problem combined. Taken together, these two might be said to be the great problems in education for at least the decade that lies ahead.

Curriculum reorganization. It is not improbable that a century from now the World War will be looked upon as the closing of one era and the beginning of another in world history, much as the Protestant Revolts of the sixteenth century and the French Revolution of the late eighteenth century have come to be regarded. The World War set in rapid motion forces that had long been under way, and the changes in living that are following it are certain to be far more swift than would have been the case had the War not been brought about. In consequence, since education aims to prepare youth for effective living in modern conditions, we need to predict as well as we can what changes will ensue, and then try to shape our school work accordingly.

Of some of the changes we seem reasonably certain. Many of the old forms of knowledge are likely to be much less useful as preparation for the modern world than they have seemed to be in the past, and our school training must emphasize more what the world of the future will call for, both in knowledge and training. Just what this is we do

not quite know, but thousands of people are at work to-day trying to find out. We do know, however, that this world of the future will be a world of science, and industry, and commerce, and intercommunication; that the relations between peoples will be closer than before, and that in consequence we must learn better how to live in peace with one another; that the competition will be keener; that living will be more complex and more difficult; that complicated problems in politics and economics and international relations will have to be met and solved; and that the uneducated man and the untrained worker will have but little chance for success. Machinery will continue to displace the untrained worker; comforts and conveniences will be multiplied; children will need to work less and less; and the life of all will be made easier, but for children more dangerous.

The future, too, almost surely will call for a very practical type of knowledge. Young people will need to know how to do many things, and they will need to know how to care for and protect themselves under complicated and difficult conditions. This calls for good school training in learning by doing and in problem-solving. Young people of the future, too, will need to be well trained in certain important skills and habits; to be thoroughly grounded in proper attitudes toward life's problems; and be actuated by well-thought-out ideas, ideals, and ambitions. This calls for definite attention to the "outcomes" of all instruction on the part of teachers. An education, then, that answered fairly well for a more simple and a less competitive kind of national life, will not suffice to meet the needs of the life that lies ahead of our young people of to-day.

Methods of procedure. Certain lines of action thus appear clear. In the first place, we must go over carefully what are the needs of modern life and see what young people must really know and be able to do to meet conditions as

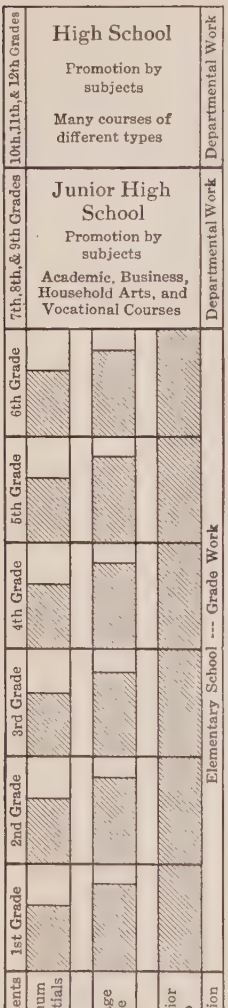

FIG. 27. THE DIFFERENTIATED-COURSE PLAN

This offers what are virtually three courses of study for the elementary-school groups.

they will find them. This might be called job-analysis work — an analysis of the job of living. It will call for many careful studies, is an important work to have done, and ultimately will lead to clear ideas of what the needs actually are. Then we must go over, similarly, all that we teach to see what is useful and what we can dispense with, in part or entirely. What is not likely to be useful we can eliminate, and use the time saved for other types of instruction. The next step will be what teaching materials do we want to introduce to meet needs not now cared for, and what new aims in instruction should we set up. Still more, can new or more definite teaching procedures be of help to us, and if so what ones and how. Our studies of the results of educational measurements lead us to think that many teaching procedures will in time be standardized, both in type and amount.

Still another phase of the problem of curriculum reorganization, and a very important one at that, has been forced to the front by the studies of individual differences that have been an outcome

of intelligence testing and educational measurements. Do all that we can, we now see that it is impossible to devise any single course of study that will not be too difficult for some and too easy for others. Still more, with every course of study should go liberty in adaptation to meet the varying needs of classes and schools. To adjust our work in any reasonable way to individual differences and needs calls for individual and differentiated instruction, at least throughout the elementary-school grades, and differing courses and goals and rates of speed for pupils in the upper schools. Many city schools to-day, in attempting to meet pupil differences the better, are outlining three different elementary school courses of study, each course requiring the same time to complete, as is shown in Figure 27, and then permitting slower or more rapid progress in the high school by means of promotion by subjects instead of by grades.

Eliminations and procedures with the drill subjects. Very marked changes in subject-matter and procedures have taken place, within the past quarter-century, in what are classified on page 274 as the drill subjects. These represent the fundamental tools of learning, and some proficiency in their use is a necessity.

In reading, for example, we have found by the use of the new educational tests that silent or thought-getting reading is more important than oral reading, and that the latter, while important, has been much over-emphasized in our schools. We have, accordingly, made some economies in the teaching of reading. In writing, letter forms have been simplified, writing made easier to learn, better methods for teaching it introduced, and the degree of perfection attainable with reasonable effort, standardized. (See Figure 22, page 259.) In spelling, vocabulary studies have shown the great waste in teaching so many words, as they are not used in ordinary life. Consequently spelling to-day is largely

concentrated on some two thousand of the most commonly used words, instead of being scattered over the ten to twelve thousand words the Spellers used to contain. Better psychological methods in teaching spelling have also helped to effect a greater saving of time in the subject, with an improvement in results. In language, language usage based on an effort to express ideas, and not training in mere language form, is what is wanted. Much of the language teaching used to be of a type that no one but a school teacher ever had use for, and was of little value as training in the use of correct speech forms. The technical grammar upon which elementary-school children used to spend so much time and effort has also been shown to be of but little value. In arithmetic, much of what used to be taught has been eliminated. Instead of the study of seldom-used weights and measures, square and cube roots, partial payments, foreign money, longitude and time, partnerships, and similar subjects, we to-day concentrate on the arithmetical processes one will need to use in life. These are, chiefly, addition, subtraction, multiplication, division, simple and decimal fractions, simple percentage, and a little of interest and discount. Few people have occasion for anything more. In addition, more oral work has been introduced, and far better psychological methods of teaching the subject are now employed.

It is doubtless true that these fundamental tool subjects are to-day much better taught than they used to be, that what is now included in them is of more future value to the pupils, and that all this is done in at least one half the time that used to be spent on these subjects three fourths of a century ago. This was well established by the Springfield tests, and other similar studies of comparative pupil abilities.

The content subjects. These studies have been so named because their subject-matter represents knowledge — the

accumulated wisdom of the ages. The drill subjects represent tools with which to unlock something — the keys of knowledge; the content subjects that which is unlocked. We teach them to widen and deepen the experiences of children, to reveal to them something of their inheritance in literature and history and science, and to give them guiding knowledge for the journey of life.

In the teaching of these subjects, great changes have been made within the past quarter-century. In geography and history particularly has the memorization of facts — thousands of them — given way to the teaching of an understanding of man and his environments, past and present. The problems that he has wrestled with in the past and how he lives and works to-day are the points of emphasis. Literature aims largely at appreciation and the formation of tastes and attitudes, though it also has much content value in the study of characters in action when faced by the problems of life. We study literature itself now, in selected pieces, and not about the lives of those who created it, with samples of their style. The civic studies have changed from the study of the forms of government — constitutions and laws — to actual studies of government in action and the needs of citizenship. Nature study in the lower grades, science studies in the upper grades and the high school, and agriculture as an application of a science to production, represent new content studies of the greatest value. Health work is another new study, largely in applied science, and of very great content importance. These new studies aim to train young people to know, to understand, and to care about the world of science in which they live, by training them in "studied observation made through the senses."

The new expression studies. While music and drawing become vocational studies for but a few, they are important as appreciation and expression subjects for many. The

manual arts and domestic arts are important for mere knowledge, as means of learning by doing, and for the understanding they give to many of the problems of living. School gardening and the different vocational subjects are educative in themselves, are creative in type, and serve to give an understanding of economic and industrial processes that will mean much to the future citizen. For many city school children school gardening is almost the only contact with nature they ever get. Through plays, games, and auditorium and civic activities, the school applies the Dewey educational philosophy and makes the work of the school real life.

All the expression subjects are relatively recent introductions into school work, and all are important in building up a school spirit, training in organization and self-control, giving understanding of industrial organizations and processes, developing managerial capacity, and training in the ways of citizenship. The special room, the shop, the laboratory, the auditorium, the playground, and the civic life of the school are all utilized for teaching ends. The teaching methods, too, are different from those used with either the tool or the content studies — the pupils doing much more and the teacher much less.

The high-school studies. While no accurate figures are available, there were probably about five hundred high schools in the United States by 1870, and about eight hundred by 1880. Then the period of rapid development of the high school set in, and by 1890 — the first year for which complete statistics were collected by the United States Bureau of Education — the number was 2526. Thirty years later (1920) the number had risen to 14,326, employing 97,654 teachers, and enrolling 1,857,165 pupils. Five States — Illinois, Ohio, Pennsylvania, California, and New York — each had more pupils in high schools in 1920

than were enrolled in the entire United States in 1880. New York alone had twice as many. High schools are increasing to-day, both in numbers and in enrollment, faster than any other part of the public school system. By 1925 there were probably sixteen thousand high schools in the United States, with at least two and a quarter-million pupils.

Along with this remarkable development of the high school has come a marked change in its character and purpose. The early high school was essentially a book-study high school with a three-year course, and its building contained classrooms, a study-room, a principal's office, and possibly an auditorium. Many early high schools were housed in one or two rooms on the upper floor of an elementary-school building, and one or two teachers taught all that was offered in instruction. Such schools were equally innocent of libraries or laboratories, as well as of all other modern teaching equipment. The subjects commonly taught were Latin, Greek, algebra, geometry, trigonometry, natural philosophy, rhetoric, general literature, general history, United States history and constitution, and bookkeeping. The student body represented a rather selected body of young people, drawn largely from homes representing education and culture.

After about 1880 to 1890 the introduction of new subjects of study was so rapid that the old high-school course likewise became overcrowded, resulting in:

(*a*) The extension of the high-school course to four years;
(*b*) The introduction of options and electives in the course;
(*c*) The creation of a number of parallel courses of study; and finally,
(*d*) The development of a number of different types of high schools.

Entirely new types of pupils now began to come to the high school for training, and the function and ideals of the

school changed with this change in clientele. The children of the older and better-educated stocks found themselves sitting side by side with the children of the newer-population types. The old book-type of instruction no longer sufficed, and an attempt was now made to adjust the instruction to at least four types of pupils, namely:

(*a*) Those who would go on to college after graduation, and probably train for some profession;
(*b*) Those who would graduate and not go to college, but would enter positions in the commercial or industrial world;
(*c*) Those who would complete two or three years of high school, and then drop out and go to work at what they could find to do; and
(*d*) Those who would soon find the high school unsuited to their capacities, drop out during the first year, and go to work in the unskilled trades.

To-day our larger so-called cosmopolitan high schools offer instruction to so many different types of pupils, and in such a variety of subjects — cultural, scientific, commercial, agricultural, vocational — that the problem of the better adjustment of the high-school work to the needs of our national life and the future needs of society has been vigorously pushed to the front. Much has been written on the problem, a number of important investigations have been made, and a large experimental school (The Lincoln School) has been established by endowment in New York City to study the question.

Proposals for high-school curriculum reorganization. Most of the proposals have centered around the reorganization of the course of study, and the changing of the nature of what is taught by eliminations and substitutions, as in the case of the elementary-school curriculum.

Two of the more important of the numerous proposals for reorganization of the work of the high school, both repre-

senting the lines along which present-day thinking is being directed, will be cited here. One, that of Flexner, holds that a modern secondary school course of study should be directed toward preparing young people to understand and care for the institutions of modern society, and to that end its curriculum should emphasize four main fields:

1. *Science* — This to be the central feature of the school.
2. *Industry* — The occupations and trades of the industrial world.
3. *Civics* — History, civic institutions, and the organization of society and government.
4. *Æsthetics* — Literature, languages, music, art.

Each of the subjects taught, he also contended, was in need of revision to eliminate subject-matter no longer useful, and to add essential new materials. The Lincoln School was founded largely to make the studies needed for these revisions.

The second proposal, that of Bobbitt, was along somewhat different lines. Its aim was to establish a common basis for training which all pupils would follow, with electives to supplement the basic studies, and vocational studies to come at the end of the general education period. He proposed the following groupings of the high-school course.

I. *Basic studies* — To be taken by all pupils.
   1. English usage — Training to read, write, and speak the English language with a reasonable degree of accuracy.
   2. Social studies — A reorganized history, citizenship training, and economic studies.
   3. Every-day mathematics — Life problems, to train for quantitative thinking.
   4. Scientific knowledge — Essentials of physics, chemistry, biology, and astronomy.
   5. Physical and mental training — Exercise, hygiene, mental hygiene, preventive and constructive knowledge.

6. Unspecialized practical arts — For both sexes. How to handle tools, make repairs, and do many useful things about the home and shop.
7. Literature — English and general, largely for appreciation.
8. Music — For understanding and appreciation.
9. Art — Appreciation of beauty in its different forms.

II. *Extras*, or *Electives* — Not to be substituted for any basic study.
1. Foreign languages.
2. Advanced mathematics.
3. Science studies.
4. History and development of English Literature.
5. History of civilization and progress.
6. Musical study.
7. Art study.
8. Writing; Dramatics.

} For technical proficiency to those of ability.

III. *Vocational studies* — To follow basic and general studies.

Instead of the numerous curricula he would have but one curriculum for all, except for electives. The different abilities of pupils to do work he would handle by dividing the high school into ability divisions, much as for the elementary school shown in Figure 27, with differently weighted courses for the different ability divisions.

A fundamental reorganization of school work. All the curriculum reorganizations so far described represent attempts to save time by course-of-study eliminations, and to produce a more effective type of education by rearrangements of work and the introduction of new types of teaching and teaching materials. All that has so far been described might take place in a school system which remained organized into eight years of grade work and four years of high-school work.

Within the past decade and a half a far more fundamental reorganization of our educational work has been begun, the

better to adapt it to new instructional needs, and so successful has this reorganization proved that to-day it is being put into effect, in whole or in part, all over the United States. The main ideas underlying this reorganization movement have been that the work of the upper grades has by now become so broad in extent, and requires such a degree of preparation on the part of teachers, that the old grade-teacher system is no longer efficient; that the grade-teacher form of organization can and does take but little account of the gradual differentiation in tastes and capacities and the future needs of children which takes place after about the age of twelve; that the grade-teacher system makes no real preparation for beginning high-school work, with a resulting heavy mortality in the ninth grade; that the rational time for an important change in the character of school life is when the pupil is leaving childhood; that the period of early adolescence calls for a different type of treatment from that provided by the usual grade-teacher instruction; and that, in consequence, a new type of school should be evolved and put in between the first six grades on the one hand, and the last three years of the high school on the other, this school to be specially designed to meet the peculiar pupil needs of the years that lie between.

Acting on these ideas, many school systems, in all parts of the United States, have recently reorganized their plants by changing them from an 8–4 school system to a 6–3–3 school system. Figure 27, page 278, shows the completed change. Because of its many superior features this new form of school organization seems destined to be adopted wherever the school system is large enough to permit of such reorganization.

Reorganizing the grade work. Accompanying this general reorganization of school work into new divisions has been a fundamental reorganization of the instruction, in a

few of our cities, within each of the main divisions of the school. The most fundamental reorganizations in subject-matter and teaching procedure have been made in the lower grades and in the junior high-school years.

In the grades, a very important change in organization and teaching procedures has been effected by the introduction of some form of the so-called Gary, or platoon plan. Sometimes this form of organization is known as the duplicate-school plan, or the work-study-play plan. Beginning at first as a means of making a school building carry a larger load, in number of pupils, the plan has since been made to provide a richer type of instruction for the children in the schools. Especially has the instruction in the new expression subjects profited by the changes thus instituted, as these can now be taught in special rooms and by special teachers.

The essential features of the platoon plan lie in, first, the setting aside of a number of the classrooms to be fitted up as rooms in which to teach the special subjects — music, drawing, science, literature, manual arts, domestic arts; second, in specializing in part the work of the teachers; and third, in so increasing the number of children that the building carries two schools — an A School and a B School, or, as they are sometimes designated, an X School and a Y School. The auditorium and playground are used for group work. The instruction is then so arranged that when one school is using the regular classrooms for the drill and part of the content subjects, the other school is using the special rooms, the auditorium, and the playground for content and expression work, and *vice versa*. The two schools alternate twice each day in the use of the school facilities. The day is lengthened somewhat to give more time for the special instruction, though the time actually spent in the classrooms is decreased. Roughly the time distribution is somewhat as follows:

Periods	A School	B School
8.30 to 10.00	Class Work	Special Work
10.00 to 11.30	Special Work	Class Work
11.30 to 12.30	Noon Intermission	
12.30 to 2.00	Class Work	Special Work
2.00 to 3.30	Special Work	Class Work

Applying the plan to a small building, and taking the first period in the morning as an illustration, we would get the following weekly distribution of classes:

A School	B School		
6 classrooms, at 35 pupils each Total, 210 pupils	Science room (3 days) Drawing room (2 days)	35 pupils	
	Gymnasium room	35	"
Reading Spelling Writing Language Arithmetic	Supervised play	35	"
	Literature room	35	"
	Auditorium	35	"
	Music room (3 days) Manual training (B) (2 days) Domestic science (G) (2 days)	35	"
	Total	210	"

The platoon plan calls for better teachers, better administration, better supervision, and better care of children, and is in consequence a somewhat more difficult plan to administer than is the old grade-school type of organization. It has, however, a number of educational advantages which recommend it. Besides causing the building to carry a larger load and be more continuously in use, it provides the pupils with a school day that is more varied, more interesting, more intense, and better educationally than the old grade school, and one which is less fatiguing to them. The partial specialization of the facilities and the instruction adds to their effectiveness, and good instruction in the special subjects can now be given without prohibitive costs; the supervised play replaces the old pell-mell recess; the auditorium activities can be made highly educational; the discipline is easier

and better; and the opportunities for socialization of the pupils and training in citizenship are increased. It is these and other advantages which have caused a number of our larger school systems to adopt the platoon plan for the lower grades. Under it the pupils can still be divided into either two or four groups, based on ability to do, and the instruction adapted to their needs accordingly.

The junior high-school organization. The most far-reaching reorganization of our educational work has taken place in the seventh, eighth, and ninth grades. Taking the first two from the old graded school, and the third from the high school, these three grades have been grouped together, usually in a new building, to form what is now known as the junior high school. This has been not merely a regrouping of classes; it has become much more — a really new creation in American education, adapted to the peculiar biological and psychological development of young people in their early teens. An entirely different type of instruction has been supplied throughout; one suited to the special developmental needs — physical, mental, social, and moral — of widely varying types of boys and girls in their early adolescent years.

The great aims of this new school, aside from mere learning, are the intelligent sorting and class placement of pupils; flexible and differentiated group study; failure prevention; the establishment of moral values and the right type of habit reactions, at a peculiarly nascent period in the pupils' lives; proper individual and group contacts for the sexes; citizenship training through citizenship activities; socialized activities of many types; the beginnings for some of vocational instruction; and vocational guidance for all. The school coördinates the work of the grades with that of the high school in a new way; it offers curricula differentiated now in type, instead of merely in amount; it provides an

experimental and an exploratory period during which the pupil is assisted to study himself and to try out different vocational possibilities; loyalty, coöperation, social attitudes, civic pride, and willing service characterize the spirit of the school; while the work of the school is centered about the building up of social, moral, civic, and religious personality.

The 6–3–3 plan not only makes better provision for meeting varying educational and social and civic needs, but it can be defended as psychologically more sound than the 8–4 plan. The age of twelve, rather than fourteen, is the dividing place between the pre-adolescent and the adolescent stage of development, and the place where methods and types of instruction should change. By the rearrangement described, each division of the school system is made to serve a distinct educational, social, and psychological purpose, and the school is made into a much more useful educational and social institution. Eight years, beginning at six, carries the child beyond the period necessary for acquiring the tools of knowledge, and beyond the natural division of his life which comes at adolescence. Instead of being kept under grade teachers, grinding on the tools of knowledge long past the period of interest in such work, the pupil at twelve passes to a school organized by subjects, with differentiated courses, taught by teachers with much better preparation in specialized lines, and to a school organized to utilize, in productive learning, that curiosity, eagerness, plasticity, impressionability, and ambition toward adult goals which characterizes the years from twelve to fifteen. Here the pupil finds general courses offering a survey of the fields of human knowledge, and instruction that seeks to determine individual aptitudes and abilities.

The high school, and the junior college development. The high school, too, has experienced a remarkable change in character during the past quarter-century. To-day it is

a large and important institution, and carries on many lines of instructional, social, civic, physical, and guidance activities unknown in past years. Its teaching force is as large, its organization as complex, and its plant and equipment as good or better than that of many colleges of to-day. Its largest present problem is that of so reorganizing its instruction, as was indicated earlier in this chapter, as to introduce a unity among its diversity and thus direct what it does along the lines needed by our modern complex life.

Another recent development in secondary education of large future significance for our Nation has been the extension of the high school upward to include the first two years of college work, and the organization, in many communities, of what has come to be known as the junior college. Sometimes the junior college and the high school are one institution, and at other times separate but related institutions have been organized. We thus get, as a result, either a 6–3–5 or a 6–3–3–2 plan of educational organization. The ultimate conclusion of this reorganization means the development, in many cities in each State, of a junior college organization which will provide for the city or county, or even for a larger area, a local college offering as good instruction as the colleges themselves provided a third of a century ago, and under better conditions of plant and equipment. The state universities can then reduce their Freshman and Sophomore years to a preparatory department, or omit them altogether, and become universities in fact as well as in name — that is, institutions consisting of a large group of professional schools beginning at the junior year. A recent extended study of the junior college development indicated this as the almost certain line of development in American education. At its conclusion we shall have the type of educational organization represented by the right side of the drawing given in Figure 28.

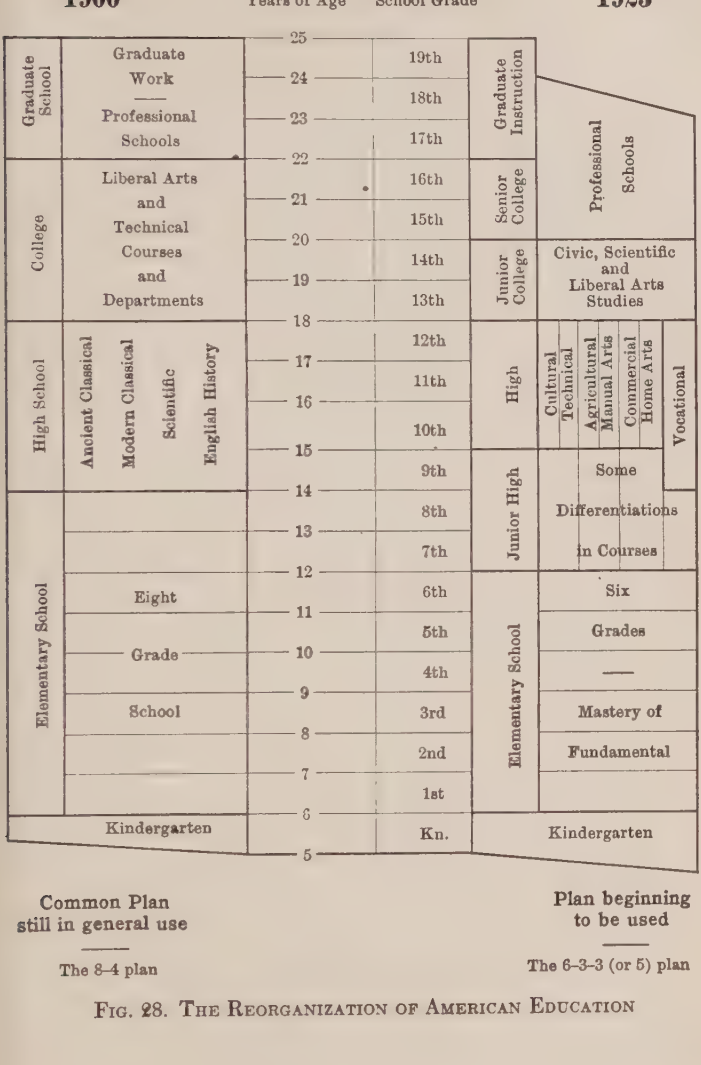

FIG. 28. THE REORGANIZATION OF AMERICAN EDUCATION

Significance of the reorganization movement. Like the earlier curriculum-reorganization movement, the recent movement for a reorganization of our educational system along better lines has been but another effort to adjust the work of our inherited educational system to meet the changed conditions in our national life — social, industrial, political, religious, scientific — brought about by the great alterations in industry and home life and government which we have recently experienced. The movement is also an attempt to apply psychological facts to the organization of instruction, to ground our school organization on the knowledge made available by the scientific study of the educational problem, and to economize time in preparation for useful service. Stated another way, it is an attempt to coordinate theory and practice, and to create, by evolution from what we now have, a new and a better system of public education adapted to the peculiar needs of child life, and to the demands of the scientific, democratic, and industrial world in which we live.

The scope of this chapter. This chapter has traced the great school reorganization movement of the first quarter of the twentieth century, as it relates to the reorganization of both the courses of study and the divisions and purposes of the school. It has been a movement of very great significance for the future of American education, and is one the importance of which the general public has not yet come to understand. In another decade or so its full significance will be more evident. It means the making over and redirection of American education.

The subject-matter of this chapter is dealt with in detail in such college courses as *The Elementary School Curriculum*, *The Junior High School*, *Secondary Education*, and *Curriculum Reorganization*. In the normal school the part relating to the elementary school is taken up in considering the

work and methods of the elementary school, and often *The School Curriculum* is a course offered in addition.

QUESTIONS FOR CLASS DISCUSSION

1. Contrast the older conception of education with that of to-day, and show how this change has made of the school a new institution.
2. Show how the changes in life conditions, described on page 277, will necessitate much closer attention to the outcomes of teaching.
3. Give some illustrations of job analysis applied to life needs and curriculum-making.
4. Give an instance where some teaching procedure might be standardized, with resulting economy of time and effort for the school.
5. In the light of the best modern theory of education, as stated in Chapter IX, is there any reason why we should have uniform courses of study for a whole city? How much liberty could we allow? Why?
6. Would there be any advantage, in the use of differentiated courses of study requiring the same length of time to complete, of holding each child to the same number of years in the elementary school, over giving him extra promotions and pushing him ahead? Why?
7. In the light of what was learned in Chapter XII, on "The Learning Process," show the usefulness of the Expression Subjects in training youths.
8. In a democratic type of government, should the doors of the high school be open to a wider range of youth than in a monarchical type of government? Why?
9. Does the Bobbitt plan of basic and elective studies appeal to you as desirable, or would you favor differentiated courses adapted to the needs of the four classes of pupils listed on page 284? Why?
10. Would the grade-school or the platoon type of organization be most likely to provide a richer and a more stimulating atmosphere for the school? Why?
11. What do you understand to be meant, with reference to the junior high school, by "an experimental and an exploratory period"; "courses that offer a survey of the fields of human knowledge"; and by "the building-up of personality"? Would the new aims for the school, as stated on page 290, justify the creation of the new organization?
12. Show how, with a 6–3–3 plan, it could be made possible to put all children through the ninth grade before the end of the compulsory education period.
13. Explain why so much consideration is to-day given to problems of curriculum reorganization and educational reorganization, whereas a third of a century ago we were fairly well satisfied with the type of schools we had.

EXERCISES AND PROBLEMS

1. Compare a textbook of seventy-five to a hundred years ago with a present-day textbook in reading, geography, history, language, or arithmetic, and describe the differences.
2. Look up and report on *The Springfield Tests*, as given by Caldwell and Courtis.
3. Draw up a ruled rating sheet, with each of the expression studies listed in a column down the left-hand side, and the following qualities in training in order across the top: — school spirit, organization, self-control, understanding of industrial processes, managerial training, citizenship training, practical utility, problem-solving, judgment. Then rate, on a scale of 5 [very good (4), good (3), fair (2), poor (1)], each expression study.
4. A good high-school staff of a quarter-century ago, in a city of fifteen to twenty thousand people, consisted of a principal, a janitor, and ten to fifteen teachers; offered from three to five courses of study, differing only in part; and had a student body of from three to four hundred. Compare this, in staff and offerings and student body with a high school in a city of similar size to-day.
5. Read up and describe the Gary School plan, or the Platoon plan.
6. Read up and describe the work of a good Junior College.

COLLATERAL READING

*Bonser, F. G. *The Elementary School Curriculum*, chaps. I–V.
Bourne, R. S. *The Gary Schools.* (200 pp.)
Briggs, T. H. *The Junior High School*, chaps. I, II.
*Bunker, F. F. *The Reorganization of the Public School System*, Bulletin 8, 1916, U. S. Bureau of Education. (186 pp.)
Caldwell, O. W. *Science Remaking the World*, chap. I.
*Caldwell, O. W., and Courtis, S. A. *Then and Now in Education.* (400 pp.)
Dewey, J. and E. *Schools of To-morrow*, chaps. VII and X. (Gary.)
*Flexner, A. *A Modern School.* (23 pp.)
*Hardy, E. L. "The Reorganization of our Educational System"; in *School and Society*, vol. V, pp. 728–32.
Horn, J. L. *The American Elementary School*, chaps. II, XIII.
Lewis, W. D. *Democracy's High School.* (125 pp.)
*Pechstein, L. A., and McGregor, A. L. *Psychology of the Junior High School Pupil*, part II.
Robbins, C. L. *The School as a Social Institution*, chaps. XII, XIII.
*Russell, W. *Economy in Secondary Education.* (74 pp.)
Van Denburg, J. K. *The Junior High School Idea*, chap. I.

CHAPTER XVI

NEW SOCIAL RELATIONS OF THE SCHOOLS

New functions and services. Along with the marked expansion of the school curriculum and its change in character, and the reorganization of the school the better to adapt its work to the growth needs of the pupils and the new social and civic demands of our national life, as described in the preceding chapter, has come another important development of the school in what it now does, along new lines, for both the children and the adults of the community which it serves. Once a somewhat isolated and a purely academic institution, dealing only with children, the school of to-day has taken on many new functions and services that cause it to influence the lives of children and to reach into the homes of the community in many new and important ways.

These new services and functions of the school have been added one by one, and their addition has come about as a part of a great social movement among our people. In part this has been as a result of the work of the school itself, and in part the result of outside forces. Whatever the origin and cause, though, an entirely new attitude toward problems of child welfare and social welfare has come to characterize the thinking of our people, within the past quarter-century, and many new laws of a humanitarian and child-welfare type have found place on the statute books of our States. The school has shared in this movement, and in some of it the school has been the leader. As a result, progressive school systems to-day are carrying on activities and rendering a social service that a few years ago was not only almost unknown, but would not then have been considered a func-

tion of the school at all. What the more important of these new functions and services are we shall consider in this chapter.

Compulsory-attendance legislation. The enforcement of the compulsory attendance of children at school was probably the first of the movements which have served to change the character of the relations of the school and the home. Massachusetts enacted the first modern part-time compulsory-attendance law in 1852, and Connecticut, in 1890, the first law requiring attendance at school the entire time the schools were in session. Since 1900 there has been a general revision of earlier laws to make them more binding, and the majority of our States now require the attendance at school of all children, with certain exempted classes, for the full time the schools are in session. The tendency, too, has been to increase the compulsory-age limit from twelve or thirteen to fifteen or sixteen years of age. Coupled with the new compulsory-attendance legislation has come much new child-welfare and anti-child-labor legislation. As a result the labor of children has been greatly restricted, the demand for school facilities greatly increased, and special officers have been found necessary for the enforcement of the new compulsory-attendance and child-labor laws.

One of the outcomes of this legislation has been to throw an entirely new burden on the schools. Whereas formerly the pupils in school were those for whom the school was well adapted and who wanted to attend, to-day the demand is that the school shall educate "all the children of all the people." The truant and the incorrigible, who once left early or were expelled, must now be cared for, and the school now finds it a much more difficult matter to teach all the children than it used to be to teach only those who came to learn. The enforcement of the compulsory-education and the child-labor laws, too, has brought into the school the

foreign-born who prefer to work; those who have no aptitude for book learning; many children of inferior mental ability, who do not profit by ordinary classroom procedures; and, in addition, the crippled, the tubercular, the deaf, the epileptics, the blind, the sick, the diseased, the needy, and the physically unfit. Not infrequently boys have been taken from work, and newly married girls brought back to school. The result has been to throw upon the school a new burden in the form of a public expectancy for accomplishment, whereas a compulsory-education law cannot create capacity to profit from education.

Attempts to solve the new problems. At first the schools were literally swamped by the magnitude of the new undertaking. Under earlier conditions the school, not geared to educate such children, let them drop from the rolls or expelled them, and no longer concerned itself about them.

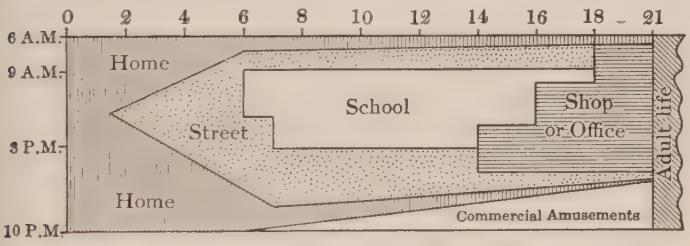

FIG. 29. HOME, STREET, SCHOOL, AND OTHER INFLUENCES
(After Perry.)

With the enforcement of the new laws the school was compelled to face a new instructional problem. The task became that of trying to salvage as many of these misfits as possible, training them for whatever form of social and personal usefulness their talents would allow, and then turning them back into society with some equipment serviceable to themselves and others.

This called for a very material expansion of the scope and work of the public school, the employment of new means of classification and instruction, and the creation of new types of classes and schools. We soon found that many school systems, because of their small size, could not meet the problem alone, and that some county or State schools of special type — parental schools, industrial schools, reform schools — were needed to supplement what the puplic schools could do. We also soon learned that it would cost more to care for and educate such children properly than to teach normal children, but that it would be cheaper for society in the long run that the schools should do the work.

The problem, too, soon became evident as a double one — first, that of providing for the needs of the classes forced into or forced to remain in school; and second, that of preventing the development of delinquency among the other children of the school. Unless both these needs could be met, compulsory-education laws would only force into the schools types of children who would get but little value from the instruction, and who would prove troublesome, with a resulting increase of over-age and retarded children, disciplinary cases, corporal punishments, the contamination of other groups, and at the same time defeat the social and citizenship aims of the school.

Solutions arrived at. After much experimenting, the needs of the classes forced in or to remain have been met largely by the organization of the differentiated courses of study we have previously described (see Figure 27, page 278); the establishment of elementary industrial-school work for those who cannot profit by the regular school instruction; the formation of non-English-speaking and over-age classes; the liberal use of play and training in organized government and control; emphasis on the newer expression studies which involve the elements underlying the trades of

modern industrial society; and the organization of special school classes, in school systems large enough to provide them, for the tubercular, the deaf, those with speech defects, the mentally subnormal, the incorrigible, and other irregular types of pupils.

For those with a tendency to become wayward the problem is one of weighting down the wrong path by making it hard to follow, and of lightening up the right path by giving it the rewards and social approval of the school as an institution. Further to aid in handling truancy, waywardness, and incorrigibility, the disciplinary class in the regular school building; the parental school for the county, or city, or the two combined, to which incorrigibles are committed for confinement and instruction; the central school for odd or peculiar boys and girls, where reformation may be attempted by specialized instruction along vocational lines; and the State industrial or reform school have been the remedies worked out. The next step in a State system of education for delinquents and incorrigibles is the penitentiary for youthful first offenders. The main idea through all this series of schools is to check waywardness early, to reëducate rather than to punish, and to save for social usefulness as many as is possible.

School health work. In 1894, following a series of epidemics, Boston organized the first school health service in the United States. Three other cities — Chicago, New York, and Philadelphia — had done likewise by 1900. After that date the success of the work and the need for such service rapidly became evident, and by 1911 over four hundred cities had organized some form of a school health service. The number to-day is large — probably not far from fifteen hundred. The first school nurse was employed in New York City, in 1902, and the new idea proved so valuable that many towns and cities now have school nurses

when they do not have regular school physicians. In 1906 Massachusetts adopted the first State-wide medical inspection law, and this legislation has now been followed by many States.

From mere medical inspection to detect contagious diseases, with which the movement began, it was next extended to tests of eyesight and hearing, and then to an examination of ears, nose, throat, and teeth. The next step was the general physical examination, and this was followed by supervision of the teaching of health and hygiene in the schools, some oversight of plays and games and physical training, and finally, the organization of a constructive program for the development of the health and physical welfare of the children. The coming of new types of pupils into the school only gave emphasis to this new work.

It was soon found, though, that examinations in the school and instruction in classes did not secure the desired results, especially with many of the pupils brought in by the enforcement of the compulsory-attendance law. The homes needed to be reached, and much follow-up work was called for. To influence parents to provide the needed medical attention was found to be no easy task. Many would not believe that the defects existed, or that they needed attention; many resented being told that they did not care for or feed or clothe their children properly; and many were too poor to provide what was needed even if they understood. The importance of home coöperation once being appreciated, plans were laid to secure it. These called for:

1. Physical examinations, and diagnosis of needs.
2. A health and nutrition survey of the school.
3. Home follow-up work, through the visiting nurse or the teacher.
4. Good organization of hygiene teaching in the schools, first-aid work, Junior Health Leagues, Junior Red Cross, etc.

5. A constructive school program for health, play, and physical-welfare work with the children.
6. Home and school coöperation, as obtainable.
7. School feeding of undernourished children.

It was soon found that almost every extreme disciplinary case had some serious physical defect back of it, and that marked improvement usually followed its correction. It was also discovered that the feeding of undernourished children, the provision of other children with glasses, and the removal of tonsils and adenoids for others all tended toward an improvement in school work and a reduction of retardation in school. The organization of the playground activities helped in building up physical tone as well as civic and school spirit; and the organization of a school health department, with daily room inspections by the pupils, stimulated interest in a good personal health program. School health drives, care-of-teeth drives, proper-sleep drives, proper-diet drives, anti-coffee drives, better-breakfast drives, no-sweets-between-meals drives, accident-prevention drives, and be-well-and-strong drives accomplished good results with the children; and the coöperation in constructive health campaigns by pupil organizations did much to fix and carry sound health knowledge to the homes.

The visiting teacher. Most difficulties of a remedial character arise from ignorance or neglect on the part of the home in the matter of child care and feeding. While all that the school can do with the children is useful, for lasting results the most important thing to do is to reach and interest and influence the home and secure its coöperation in child-welfare work. This coöperation nearly always has to be developed slowly, by gradual stages, with the parents of the children who most need such care and attention.

At first the school nurse and a few voluntary agencies were used for follow-up work to establish a connection between

the school and the homes, and much valuable help is to-day rendered by the school nurses everywhere. The work of the school nurse, though, is somewhat specialized, and, the need for still more assistance being felt, about 1913 a few city boards of education began to appoint what soon became known as visiting, or home teachers. So useful have these new helpers proved to be that it is not unreasonable to expect that in time such a person will be found connected with each small city school system, and with small groups of schools in each of our larger city systems. Such teachers are of much assistance in helping to handle the most difficult and time-consuming cases, thus saving the time of the teachers for instruction, and they develop a technique of social-case work not possible to the class teacher and to but few principals.

The visiting (or home) teacher has an office and office hours in the school building or at some central place, and to her are referred, for investigation and handling, the difficult pupil-cases revealed by the school work. Children irregular in attendance; children unable to make the necessary social adjustments in school, children falling behind in their work; cases of underfeeding, or probable home neglect; cases of moral delinquency, or serious discipline; sometimes cases in need of physical or medical attention; and sometimes precocious children — these are all referred to the visiting teacher for home conference and report. The visiting teacher sees and talks with child and parent; tries to gain the family confidence; analyzes the case; represents the school in relations with the home; reports to the school, with recommendations; follows up the case much as does the visiting nurse her cases; and occasionally invokes the aid of the law to protect the child. Visiting teachers thus come into such close and intimate relations with the homes that not infrequently, at office hours, the visiting teacher finds

awaiting her, for further help, some mother whom she once advised in a case that has been "closed."

School feeding. Despite all that teachers or schools can do, or visiting teachers or visiting nurses where these are employed, there will still be found, in every large public school, a number of children — the number varying with the character of the neighborhood and the nationality of the parents — who do not do well in their school work because they are cold or hungry or sick, or all three. The children of the South and East Europeans are most likely to fall into this classification, though often such conditions are found among the native born. The parents poor, with large families, relatively ignorant, living in cramped quarters, and careless as to clothing and the laws of health, their children often come to school in a poorly clothed and poorly nourished condition, and not infrequently evidence the beginnings of tuberculosis.

Often school and home coöperation can do little to remedy conditions, as the parents are too poor to act even if they understood the need. Realizing that it is largely a waste of money to pay teachers to try to teach such children, many schools have begun the plan of the school feeding of undernourished children, making the charge for such work a charge against the community the same as for books and heat and supplies. A mid-morning lunch of nourishing food is served for all children seven per cent or more under weight, and many schools have added open-air school rooms for those of tubercular reaction or tendencies.

Even with children of low mentality some change is observable as a result of the extra feeding, but near-normal children show a change in attitude toward school work that is striking. The discipline becomes much easier, the children more mentally alert, their appearance better, they increase in weight and height and chest expansion, they take a new

interest in plays and games, their school work materially improves, and non-promotion among them is much reduced. Measured by the costs, school feeding gives large returns in the reduction of the expense for repeaters in the grades. Where the school authorities have not as yet been educated up to the importance of this work, the costs often are met by outside agencies or from donations.

Within recent years, impressed with the need for good nourishing food and a warm lunch for all school children, many city schools have built in a school cafeteria as a part of their equipment. This has been especially the case with the new junior high schools and senior high schools, almost all erected within the past decade being so equipped. In these the best of food is served at cost, or nearly so, and frequently means are found by which children too poor to buy a lunch are provided with tickets.

Play and recreation. One of the strong instinctive impulses of normal children is the play impulse. For long ignored and neglected by the school, it expressed itself in annoying the teacher, the old rough-and-tumble recess, street rowdyism, fighting, and the predatory gang. Coming to a new realization recently as to the educational value of play, the school has, everywhere school playground space permits, attempted to organize the playground work as an educational undertaking. In the platoon-type school play has been scheduled as a regular school subject, just as is arithmetic or music, and the pupils are trained by teachers in plays and games suitable to their ages.

The building-up among the pupils of a school of a good physical tone and a good school morale is one of the large returns that come from giving attention to the organization of the play activities of the school ground. Few other things do so much to transform the yard bully into a useful school citizen, bring out the timid and backward pupils,

limit accidents, create good feeling, reduce discipline, teach pupil self-control, train the muscles and the eye to coördination in games involving learned skills, or awaken the best spirit of the pupils. The transformation that has taken place, in recent years, in the games of youth through the influence of the school playground is wonderful. The corner-lot baseball game of fifteen years ago, with its constant quarreling, profanity, and gang groupings, has given way on the playground to a game of law and order. In all the organized games a fine point of contact between principal and teachers and pupils is established, and the ancient antagonism of youth chafing under teacher restraint disappears. In the development of team and school spirit, and the preparation for and planning of school and inter-school contests, much fine feeling is awakened and much ugly disposition is worked off.

Vacation activities. In many cities special playground commissions have been created to organize and equip municipal playgrounds, the better to satisfy this recently recognized need of normal child life. These are placed under a playground director, who is in charge after school hours, on Saturdays and Sundays, and during the vacation periods. The tendency generally to-day in planning new schools is to connect all play work with the school, to make supervised play a school subject, to open the school playgrounds as the municipal playgrounds are opened, and to provide the same extra supervision that the municipal playgrounds provide.

Recognizing, too, that in our cities the children from most homes are better off in school than in their homes or on the streets during the long summer vacation period, many school systems are now organizing special summer-school instruction, with play, games, music, literature, science, school gardening, farm projects, excursions, and the expression studies as strong features of the elementary and junior high-

school work. The summer school has been generally very successful where tried, the chief objection to it being the added cost and a certain difficulty in obtaining teachers, and such instruction is likely to increase in extent and importance in the future.

In a few rural and village communities another form of school extension has been tried, with marked success, in the way of school supervision of the recreational, social, and vocational activities and the reading of the upper-grade and high-school pupils during the summer vacation. A part of the summer activity of the pupils is planned before the close of school; one or more teachers are employed on a twelve-month basis; they visit each pupil from time to time for conference, and check up on work in progress; and at the end of the vacation period the work accomplished is evaluated and certain school credit for the home activities is given. This work has been particularly successful where agricultural or vocational projects have been signed up for; where make-up work is to be done; and in the direction of work in reading or music or drawing.

Clubs; thrift work; school spirit. With our better understanding of child life, we now know that the presence of any large amount of trouble with attendance and discipline in a school indicates that something is wrong with the school itself. A school which grasps the social significance of its work seems important to young people, it enlists their interests, and a certain subtle something that we call spirit or morale gives purpose and life to its work. The school of to-day that serves usually attaches both pupils and parents to it, if it measures up to its possibilities as a social and civic institution to train young people for effective living.

A number of different means used by principals and teachers to-day tend to develop a good school spirit, the more important of which may be enumerated. In the first place the

instruction itself must be good. Good teaching, interested teachers and pupils, and well-motivated instruction lie at the very foundation of school spirit of the right kind. The surplus energy of pupils should be utilized in many ways, one of which is helpful service. The troublesome ones should be given something to do. The playground activities should be used to develop skills, interests, and leadership. There are many group activities — such as orchestra, musical clubs, Audubon societies, Boy and Girl Scouts, health leagues, gardening clubs, canning clubs, sewing clubs, nature study clubs, camp-craft clubs, camera clubs — some of which can be organized in any school. These prove valuable in awakening interest in what is to be done. The Boy Scouts, Girl Scouts, and Junior Red Cross are organizations that can be made very useful in first-aid work, street and yard patrol, clean-up work, and many other services. These organizations foster self-reliance, personal honor, truthfulness, helpfulness, service, and similar civic and social virtues. School entertainments usually are worth their cost in enlisting the interest of parents. The school assembly is a group activity of much importance in unifying a school, and in creating a school spirit useful to control and the direction of effort. As a means of eliminating tardiness and reducing absence a good assembly organization is worth more than an attendance officer, and the interest aroused on the part of the pupils in turn finds expression in interest on the part of the parents. The school savings bank and thrift teaching have also been found very useful in work with pupils.

The use of some or many of the means just enumerated to help create and maintain a strong and healthy and loyal school spirit assists not only in school control and in enlisting the interest of parents in the work of the school, but the activities themselves give excellent training in social participation and lead to greater civic usefulness.

Civic training and guidance. Many schools, especially junior and senior high schools, have recently introduced some form of pupil control as a means for civic training, such as the school council, the school congress, and even a form of pupil government. Many elementary schools have tried the plan of school captains and a school council, with good results. Any such plan, when it can be inaugurated under good conditions and be backed by the right school spirit, is not only a valuable aid in school control, but does much to teach young people to govern for themselves. It introduces the "big brother" idea in control, tends to promote frankness and honesty, and awakens a right attitude toward law and order. Citizenship is not something to come in the years ahead, but something to be learned by living it in the school. Citizenship is a matter of attitudes, and attitudes are "mental sets," induced by behavior based on experience and knowledge.

All these forms of pupil activity give children useful education through doing, create for them standards and habits, awaken a spirit of fair play and good sportsmanship, set before them worthy ideals of honor and righteousness in social and civic life, and represent new types of instruction. Their use also serves to set off the modern socialized school from its knowledge-teaching prototype.

Still another function of the modern socialized school, especially important in the junior and senior high schools, is that of educational and vocational guidance. As soon as differentiated courses of study are reached, usually in the junior high school, the work of educational guidance should begin. Through counsel, try-out courses, a study of ability and aptitudes, and the giving of educational and vocational information, our better schools to-day try to guide the pupil toward that line of work for which he is best adapted, and in which he is likely to be most useful and happiest. Be-

ginning with an attempt to guide pupils into the right vocations, the guidance function of the school has been so expanded in recent years that to-day it comprehends far more than this, and includes educational guidance, health guidance, moral guidance, and social guidance during their school life, as well as vocational guidance toward its close. The work culminates with the placement of the pupil when his training is completed, and some follow-up oversight to see that the youth gets properly established in the work of life. All this function of guidance and placement is a quite recent addition to the service our better schools now give their children, and is only another evidence of the efforts being made to meet the social as well as the educational responsibilities imposed upon us by the changed and changing conditions of our national life.

Larger use of school buildings. Not all the newer activities of the school have been primarily concerned with the children; many have to do with the parents. Of the latter, the most significant is the change of the school house from merely a place where children were instructed, for a few hours each day, to a center for the higher life of the whole community and available for use at almost any time. School buildings have been opened to the people after school hours, in the evening and on Sunday, and a great variety of exercises has been carried on in them. In the classrooms have been held classes for instruction in school subjects, in citizenship, and for learning the laws. The schoolrooms have also been used for club meetings of many different kinds, rehearsals, gatherings of local societies, and similar purposes. The hallways have been used for exhibits and receptions; the shops for vocational instruction; the laboratories for science teaching; the gymnasium facilities for games and contests and dances.

Probably the largest use has been made of the auditorium,

where public meetings have been held, school exhibitions and entertainments given, concerts and dramatic work presented, and debates listened to and judged. With the addition of a moving-picture booth the auditorium has been much used for the presentation of educational films. In the auditorium, too, extension lectures have been given, and farmers' institutes and other meetings held. The domestic science facilities or the cafeteria are frequently called upon to provide for occasions of a purely social character, such as banquets and important celebrations.

School meetings and general elections are not infrequently held in a room in the school building, and a branch of the city or county library is often located there, open the year round. In some smaller and rural communities the school classrooms and auditorium have been utilized with advantage for the conduct of a non-denominational Sunday-school and church, and the transportation busses used to bring the parents as well as the children to the services. In a few large cities also different churches have been permitted to use the buildings for Sunday-school and church.

While many smaller places have recently erected a Community House, and employ a Community Secretary, the tendency, especially in rural districts and in the cities, is to utilize the public schoolhouse more and more as the center of the community life. Unless a community house is provided, the public schoolhouse is the one place in the community which is freely open to all, rich and poor, high and low, young and old, foreign-born and native-born, Protestant and Catholic. Here all meet on a common ground, and with a common feeling of right to do so because of a sense of common ownership. It is a non-political and a non-religious institution, supported by general taxation, and is capable of being used on equal terms by all. In this way the full value of the school plant is realized, the community

is united at a common center, and better school facilities tend to be provided. The school gains as much from its connection with the community as the community does from its connection with the school.

The Parent-Teacher Association. During the past two or three decades several organizations and movements have arisen in this country, having for their purpose a closer affiliation of the home and the school. These have taken form under a variety of names, but the general purpose of each has been much the same. Next to the board of education, these organizations stand closer to the school than any other official or non-official body, and they form an intimate connecting link between the home and the school. The organization which has attained the largest membership, and the only one to become national in scope, is what has become known as the Parent-Teacher Association. This now has branches in every State, as well as a rapidly increasing membership. When its energies are expended in the right direction it is an organization of large possibilities for usefulness. It owes its existence to its interest in the schools, and its tendency is toward constructive service. Like every other organization which is an expression of our democratic life, if rightly guided it can be made very helpful to the school; if left to its own resources by teachers and school authorities it is capable of becoming a meddlesome nuisance. Much of what such an association at times proposes represents both interest and ignorance, and thus presents an opportunity to the school whose task should be to utilize the interest for constructive service, and transform a critical into a helpful organization.

There are two main lines along which these parent-teacher organizations have rendered much useful service. The first is in doing something needed by the school, and the second is in improving their own knowledge of school con-

ditions and child needs. Every school requires to have many things done, and many helpful talks may be arranged that will set the members thinking, or will give them clearer ideas as to just what the school is trying to do. The policies of the school always need explanation and interpretation, and the support of the patrons needs to be enlisted. In the last analysis it is public opinion that controls and limits school progress, and the parent-teacher associations are potent factors in the formation of public opinion. A co-operative school-and-home policy is clearly in the interest of the schools, and the understandings that result from it form a strong anchor to windward in times of political agitation or obstruction. If the people are behind the schools the politicians are usually rather careful of what they attempt to do to them and with them.

The scope of this chapter. This chapter has covered a large number of topics, taken from several different fields — school organization and administration, school health work, play organization, civic education, etc. — and represents materials seldom organized into a single college or normal-school course. If so organized, as is occasionally done, the course would carry some such title as *Social Aspects of Education*.

The chapter has tried to show the broad social relations which have recently been established by the school, the better to promote the work it has been called upon to do; the new types of teachers and officers and services made necessary by the changed position of the school; and to point out the importance of all this new work for our democratic life.

QUESTIONS FOR CLASS DISCUSSION

1. In the light of what was presented in Chapter II, show how the new functions and services described in this chapter have come about as a natural evolution.
2. Has the new child-welfare legislation which has accompanied the enactment and enforcement of the more stringent compulsory-education laws been a result, or merely a parallel occurrence?

3. Show that compulsory attendance at school is the natural corollary of a State system of free public instruction.
4. To what extent should a compulsory-attendance law apply to private and parochial school pupils? Why?
5. Would the class of children brought into a school system by the first real enforcement of a compulsory-attendance law be a more difficult class to deal with than would be found after a dozen years of close enforcement? Why?
6. How is a small school system to handle the instructional problem created by compulsory attendance?
7. If the statement made in the preceding chapter, as to the need for a change in methods by the beginning of adolescence, holds true, should not then all adolescents who are markedly over-age for their grades be collected together, on the basis of chronological age, and taught what they need to learn?
8. Is it probable that the addition of a good health service would reduce the cost for instruction? Why?
9. Is a health service to school children essentially different from the service rendered farmers by state and national governments in the matter of their cattle and crops?
10. The budget for the school system in a city of 60,000 inhabitants recently included an appropriation for 1200 pints of milk to be delivered to the schools daily. Is this expense as legitimate as money spent for: (*a*) pens and pencils; (*b*) fuel; (*c*) towels and toilet paper; (*d*) baseballs and bats? Why?
11. Why was it, at first, easier to secure playground development through a separate playground commission than in connection with the schools?
12. Suppose that the community-center idea has taken root in a community, and the school board is asked to open the school buildings in the evening for such purposes. What restrictions might the board impose? Should a fee be charged for their use? Should religious organizations be allowed their use for Sunday school purposes? Might political parties be permitted to use the high school auditorium during a political campaign?

EXERCISES AND PROBLEMS

1. Any adequate system of health supervision will, almost of necessity, involve: (*a*) medical examinations; (*b*) dental service; (*c*) free spectacles; and (*d*) school feeding. Draw up a statement favoring or opposing these, with reasons.
2. Read concerning the work of a school nurse, or observe one, and outline her duties.
3. Read up and report upon:
   (a) The work of school savings banks.

(b) The work of parent-teacher associations.
(c) The value of school assemblies.
(d) Educational guidance in the junior high school.
(e) The wider use of the school plant.

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CHAPTER XVII

THE SCHOOL PLANT

What the new school plant represents. While reading the chapters immediately preceding this one, the student must have been impressed with how much our schools have changed in character within the past three decades. Differentiated courses of study, the recognition of and provision for individual differences, the expansion of the curriculum, the reorganization of the school system into new divisions, the organization of special types of classes, health service, supervised play — these and other changes and additions have greatly altered the original character of the school. In consequence, the school of to-day, in all its divisions — elementary, junior high, and senior high — stands forth as a new institution, prepared for a new type of individual and community service. In plan, in organization, in equipment, and in purpose the school of to-day is a vastly different institution from that of a third to a half century ago.

To the ordinary citizen, much of this change in the school is not evident without an inspection of its work. In one respect, though — that of the character of the school plant — the change is apparent even to those who give to the school only a passing glance. The transformation that has been effected in the character of our school buildings within the past half century, and especially within the past twenty to twenty-five years, has been one of the most visible marks of the change that has come over education itself. In all parts of the United States new school buildings, adapted to a modern school program, have been erected, and these are so different in character from the older type of school building as at once to attract attention and awaken interest and

pride. A new elementary-school building of to-day is a vastly different building, in construction and arrangement and purpose, from the one in which the older generation of our citizens went to school. The new junior high-school buildings represent new creations, and internally they are better adapted to the work they are to do than were the high schools of three decades ago. The high-school building, in turn, has experienced a similar development and expansion that has made of it a new institution, resembling the high school of twenty-five years ago only in a very general way.

The newer types of school buildings being erected in American communities to-day draw attention not only by reason of the new and attractive types of architecture represented, but also because of their size, equipment, and adaptability to a modern educational program. Many of our new elementary-school buildings are beautiful to look at, and make ample provision for an excellent type of educational service to pupils and parents alike. Many of the new high-school plants are being built on spacious grounds and on the unit plan — that is, a grouping of a number of special buildings, each adapted to some particular purpose, about some central axis to form an imposing architectural assemblage. The development which has taken place in the character of our school buildings represents an evolution in an effort to adapt them to the changing types of instruction for which they are called upon to provide, and it will be well for the student of education to give some consideration to a subject of so much importance.

Early elementary-school buildings. If the reader will turn back to the chart on page 17, showing the evolution of the elementary-school curriculum, and will keep this chart and the development there shown in mind as he reads, he will understand better the corresponding evolution in the building of schools that has taken place.

A century ago the graded school had not as yet been evolved, and the limited instruction provided was given by a few teachers in a few large rooms. Figure 30 will illustrate fairly well the type of school building then needed. The building shown in this drawing was erected in 1840, and the two floors it contained were alike. The first-floor room

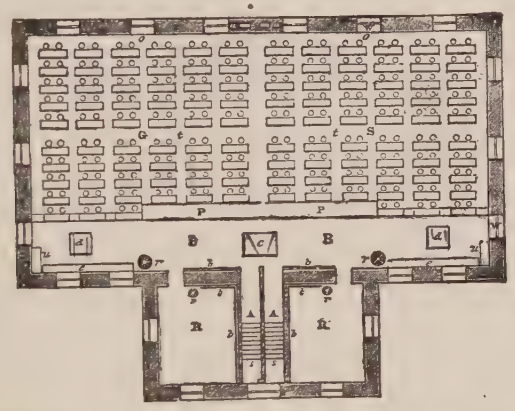


FIG. 30. AN ELEMENTARY-SCHOOL ROOM BEFORE THE DAYS OF THE GRADED SCHOOL

here shown contained seats for 228 pupils, and in it the master of the floor and his assistants taught. Another master and his assistants taught in the room on the floor above. There were, in addition, two small rooms off each main room to which the assistants could take small groups of the pupils for separate recitation or separate drill. This was the common type of school erected all through the eastern part of the country from the forties to the sixties. Sometimes the older boys were upstairs and the younger ones downstairs, in buildings of this type; sometimes the division was on the basis of sex, though most schools were for one sex only; and not infrequently each school room contained pupils of all ages. All schools were much alike.

In 1847 the graded school was first worked out in Boston, and in 1848 a new elementary-school building erected there provided for small classrooms and the grade-school type of organization. It was not, however, until the seventies that this type of building became common throughout the United States. Its essential features are shown in Figure 31, which represents a type much used during the period

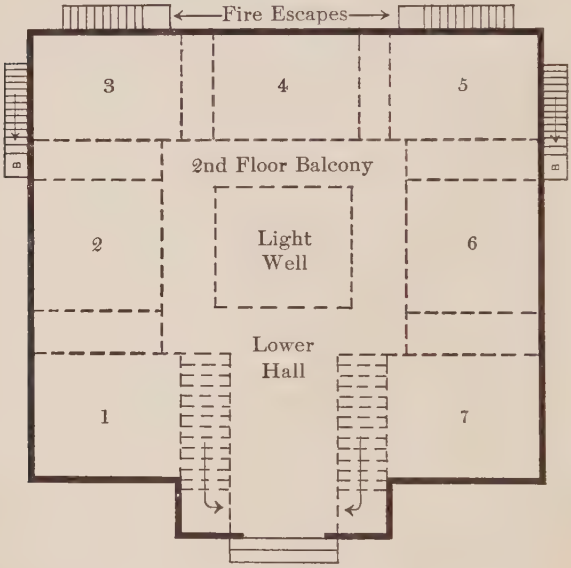


FIG. 31. A TYPE SCHOOL OF THE 1870–1890 PERIOD

from the seventies to the nineties. It consisted of a number of classrooms — in the case of this building fourteen — and a principal's office located over the entrance on the second floor. This type of building was at the time regarded as a great advance, and many thought that it represented the best that would ever be provided. Many such school build-

ings are still in use, and some even are still being erected. This type is adapted to grade-school and classroom-teacher instruction only, and to the 1875 type of school curriculum shown on page 17. It is a school building fitted to a drill and content (see page 274) course of study. But few of the expression subjects can be taught in it, and these only with a certain amount of difficulty. Music, drawing, physical training, and nature study, when given, must all be taught in the regular classrooms.

More modern elementary-school buildings. Beginning about 1900, a superior style of elementary-school building began to be erected, and one much better adapted to the newer type of educational program that was by that time coming into use in the more progressive cities. Figure 32 is typical of this later evolution. By 1900 the kindergarten had become somewhat common, manual training and domestic science and sewing had been introduced, directed play was beginning to receive some attention, and the school

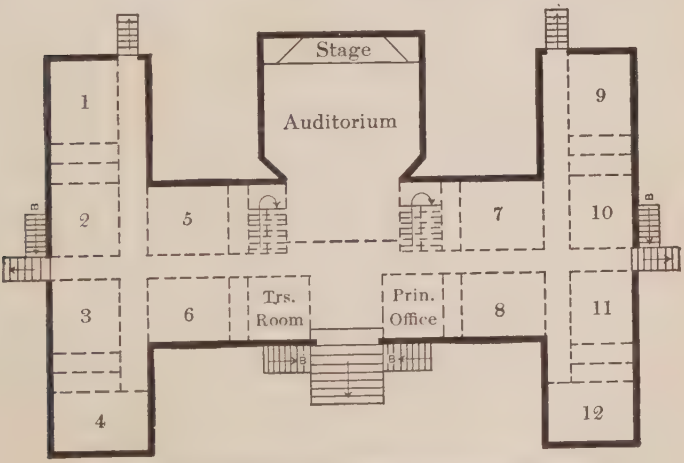


FIG. 32. AN ELEMENTARY SCHOOL OF THE 1900 PERIOD

assembly was being advocated as a unifying force in the life of the school. The building shown in Figure 32 was designed to care for this new type of school.

The main floor, it will be seen, has twelve classrooms, one of which may be used for a kindergarten, together with an auditorium, a teachers' room, and the principal's office — the latter being located, as it should be, on the first floor and near the main entrance to the building. This building having a high basement, this was used instead of erecting a second floor, and in this basement were located a gymnasium under the auditorium, toilet-rooms near the stairs, a lunch-room and a wet-weather playroom on one side, and rooms for instruction in manual training and domestic science and sewing on the other side. This type of building, with many individual modifications, is still being built and used to-day. In fact, it may be said to be the rather common type of better school building now in use, with two stories and a basement the general style followed.

Within quite recent years — since the coming of the junior high school and the increased emphasis on the expression studies in instruction — the tendency in our cities has been to build a still larger elementary-school building, and to adapt it still better to the best of modern teaching programs. In consequence, our recently erected city elementary-school buildings represent a more differentiated type of structure than anything that has gone before. Figure 33 shows, in the form of a diagram, what one might expect to find to-day, both in number of rooms and proportional distribution as to space, in a thoroughly modern elementary-school building. An examination of this diagram of rooms-and-space-distribution will reveal how much the type of school building has been changed and adapted to the modern teaching program, with emphasis alike on the drill and the content and the expression subjects. If desired, this type of elementary-

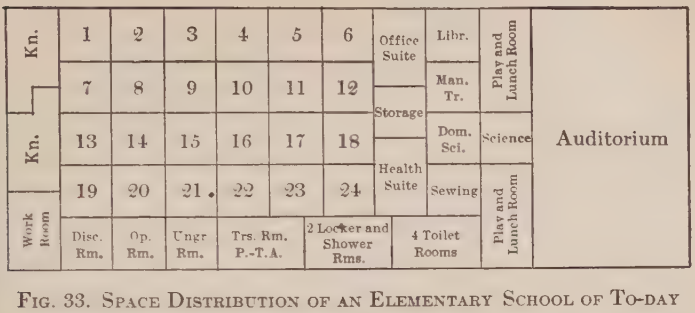


FIG. 33. SPACE DISTRIBUTION OF AN ELEMENTARY SCHOOL OF TO-DAY

In addition to heating space and rooms for janitor and supplies, this building has 24 classrooms, 2 kindergarten rooms, a disciplinary room, an opportunity room, an ungraded room, a teachers' room and parent-teacher room, 2 locker and shower rooms, 4 toilet rooms, a health suite, an office suite, storage rooms, a library room, a science room, space for the manual training and domestic science work, a sewing room, 2 indoor play and lunch rooms, and an auditorium.

school building could easily be adapted to a platoon type (page 289) of school program, the special teachers working in the special rooms.

New construction standards. Along with the change of distribution of room space has come a corresponding change in construction standards in almost every particular. Wood has given place to brick and concrete; the lighting has been changed from two sides to one, and banked so as to distribute it better; the heating and ventilating have been improved; in smoky cities the air supplied the rooms is washed; much better artificial lighting has been provided; many new forms of desks and tables have been introduced; the cleaning is done more thoroughly, and the building is more sanitary; the drinking fountain has supplanted the old tin cup and water-pail; the toilet facilities have been vastly changed in character and usefulness; and in dozens of other ways the comfort, convenience, sanitation, and attractiveness of elementary-school buildings have been improved.

Still more, instead of crowding two- and three-story elementary-school buildings on a quarter of a city block, as

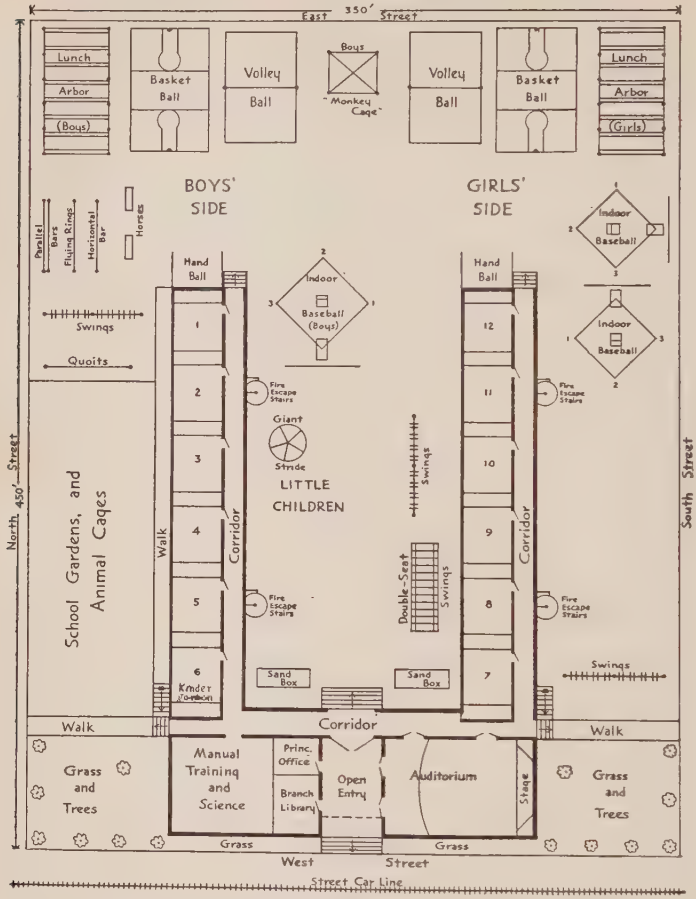


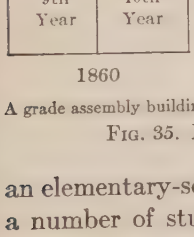
FIG. 34. A MODERN-TYPE FIREPROOF CITY SCHOOL BUILDING

Located on a city block of approximately four acres. The school is two stories high, and has two covered wet- or hot-weather playgrounds on the roof. Toilets are located throughout the building, off the various rooms. The school has twenty-four regular classrooms, an auditorium, and special rooms for manual training, domestic science, music, drawing, and science. The carrying load of the school is 840 children. The school has a kindergarten and nine grades, the three highest being organized as a junior high school. This gives a ground space of 187 square feet per pupil, building included. The domestic science suite, and the art and music rooms are on the second floor at the front. The branch library, office, and auditorium may be reached without any other parts of the building being opened.

used to be done quite commonly, and with almost no play space, the whole tendency of the past twenty years has been toward not over two-story buildings, outside of the largest cities, and the provision of ample playground space. A site of four to ten acres is now the desirable size for a large elementary school, where such space can still be had, and with one half to a whole city block as a minimum even in the larger cities.

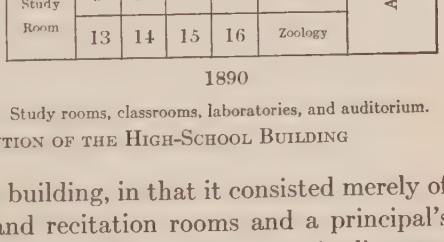
Figure 34, given opposite, reproducing the ground plans for both building and yard space of a modern fireproof elementary-school building in a city of 100,000 inhabitants, is typical of recent tendencies in school architecture and playground provisions. Such a community-center type of building, with grounds and equipment, at present prices might cost anywhere from $200,000 to $400,000. This is a very different elementary school from that shown in Figure 31 as typical of the 1870–1890 period.

Evolution of the high-school building. The high-school building, too, has experienced a quite similar evolution. In the earlier beginnings the high-school building was much like



1860

A grade assembly building



1890

Study rooms, classrooms, laboratories, and auditorium.

FIG. 35. EVOLUTION OF THE HIGH-SCHOOL BUILDING

an elementary-school building, in that it consisted merely of a number of study and recitation rooms and a principal's office. The left-hand part of Figure 35 shows, in diagrammatic form, this stage in the development of the high school,

each year-class being seated in a room by itself and being taught by one teacher. This represented the then new graded-school idea carried up into the high school. The right-hand part of Figure 35 shows a later evolution, one which came with the specialization of the teaching force, the addition of science teaching in the laboratory, and the use of the morning assembly exercise as a common meeting-place for the whole school. The new high-school buildings of the 1880–1900 period were nearly all of this character. This type of building has since been outgrown, and in many places has been remodeled and given to the junior high-school organization, while a new high school, with a better type of building and larger grounds, has been erected in its stead.

Figure 36 shows the general plan of space distribution for a modern high-school building of the so-called cosmopolitan

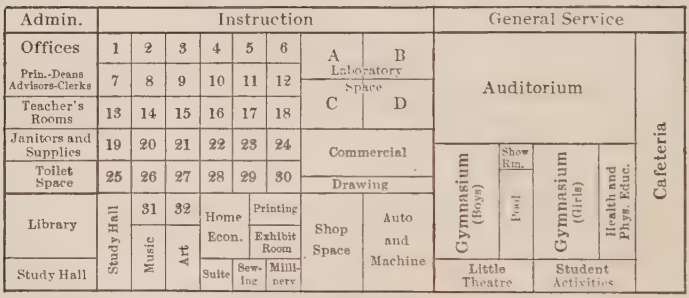


FIG. 36. HIGH-SCHOOL BUILDING ORGANIZATION OF TO-DAY
As found in the so-called Cosmopolitan High School.

type — that is, a generalized high school, rather than a special form of institution — such as would be built in a city of from twenty to fifty thousand inhabitants. Such a school would provide for the needs of 800 to 1200 students, would cost anywhere from $300,000 to $1,000,000 to erect and equip, and would offer cultural, scientific, commercial,

home-economics, and manual-arts courses. Its administration staff probably would include a principal, a vice-principal, a dean of boys, a dean of girls, a physical director, a school nurse, a librarian, and from forty to one hundred regular and special subject-matter teachers. Such a school is more than just a school — it is an institution engaged in a creative and a developmental work for the community, and one of very great future importance.

The new junior high-school building. In some places, as in the case of the Figure 34 building, the junior high school has been developed in connection with the erection of a large modern-type elementary-school building (9–3 plan), and in some places the junior high school has been organized in connection with the high school (6–6 plan). These, though, are exceptions, rather than the rule. In by far the majority of the cases the old high-school building has been made over or an entirely new building has been erected to house the junior

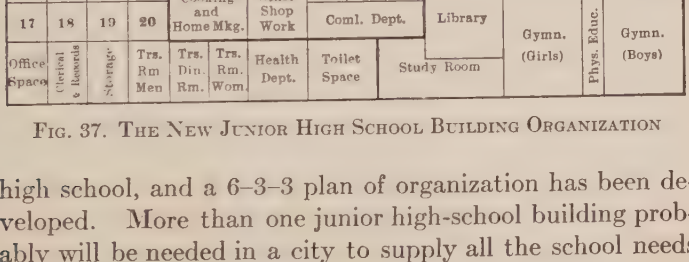


FIG. 37. THE NEW JUNIOR HIGH SCHOOL BUILDING ORGANIZATION

high school, and a 6–3–3 plan of organization has been developed. More than one junior high-school building probably will be needed in a city to supply all the school needs for such new-type instruction.

Figure 37 gives the general plan of space distribution for a

good junior high-school building, designed to provide properly for the needs of an early adolescent school covering grades seven, eight, and nine. Like the high school shown in Figure 36, it too is an institution of large potential importance. In addition to providing instruction in the usual drill and content subjects of these grades, the school looks after the health and physical development of the pupils, provides a social and civic atmosphere of large value in the training of early adolescents, and in addition carries on a considerable amount of experimental and try-out and "exploratory" work with the pupils, with a view to discovering abilities and aptitudes, and giving intelligent educational and vocational guidance. The school also offers pre-vocational work along commercial, industrial, home-making, musical, artistic, and literary lines, and in some cases along agricultural lines as well. Such a school as this, built to provide for 1000 pupils, and having from four to ten acres of land, probably would cost from $250,000 to $300,000 to build and equip.

New building standards. The illustrations just given reveal something of the changes in character of our school buildings that have come about during the past fifty to seventy-five years. The changes are quite evident if we take a series of pictures of school buildings of different ages and examine them. Regardless of when the building may have been erected, its "vintage" is clearly stamped upon it by its form, size, location, window-placing, architecture, size of grounds, and other features that even the untrained eye at once notes. Even more is this true when one inspects the interiors of a number of school buildings of various ages. Differences in height of ceiling, width of corridors, size of classrooms, general arrangement of space and equipment, type of stairways, safety arrangements, general ease of administration — all these and a dozen other features at once stand out.

So well has school-building construction been standardized at present that score cards for the different types of school buildings have been worked out, by means of which any school building can be rated. The most generally used of these — the Strayer-Englehardt Scales — provide for 1000 points for a perfect building, with around 750 for a quite satisfactory building. The score card for elementary-school buildings allots 125 points for size, form, and location of the school grounds; 165 points for the placement and general internal and external structure of the building; 280 points for the service system — heating, ventilating, lighting, cleaning, fire-protection, water supply, and toilets; 290 points for classroom location, illumination, equipment, cloakrooms, and finish; and 140 points for special rooms, offices, and service rooms.

In a recent school survey in an Illinois city of 14,000 inhabitants, the six elementary-school buildings were given total scores as follows: 429, 446, 554, 602, 590, and 639, with a median score of 550. In a recent New Jersey city school survey, the median score was 625; in two recent school-building surveys of Kansas cities the median scores were 383 and 400. The median score for 334 large cities is given by Strayer and Englehardt as 463, distributed all the way from six buildings scoring between 1 and 100 to one building scoring between 900 and 1000, and with the largest number of scores between 500 and 600. In *The Boise Survey* report (page 196), the different buildings were found to score: 837, 836, 834, 802, 786, 695, 634, 631, 623, and 596. This would indicate a school plant all parts of which were in very good condition, and probably well adapted to modern needs in instruction.

School-building surveys. As an outgrowth of building score cards and individual-building evaluation, the school-survey movement, the marked change in character of the

school instruction, and the reorganization of American education that has taken and is taking place, many cities have recently been forced to consider the problem of a partial or an entire rebuilding of their school plants. As a means of helping cities to solve their school-building problems, the school-building survey has been developed. This type of survey has come about quite recently, but has already proved its usefulness, and the principles underlying the work are such that they may be applied to any city's problem and a reasonably satisfactory solution reached.

The essential features of the school-building survey lie in first making a careful study of existing conditions. The individual buildings are scored, their location and clientèle determined, their usefulness in a modern and progressive school organization ascertained, the density and location of the school population in the city is mapped, the shifting of population and probable future needs for schools are calculated, and finally the results are plotted on a series of maps of the city. One map may indicate the probable location of school population ten to twenty years ahead, another the location of the existing plant, and another the plant needs of the future. Separate maps will be made for elementary schools, junior high schools, and high schools, and the relation of these to one another will be shown. The final result represents a careful study of the city in terms of its present plant and its probable requirements over say twenty years to come, as expressed in kinds and locations of buildings. Sometimes the final result indicates that only a few changes and reconstructions are needed, though more frequently a more fundamental reorganization of the existing plant is called for. Sometimes the existing situation is so bad that the almost complete abandonment of the school plant is indicated, if adequate housing and instruction of the pupils is to be provided. In the light of the final results the

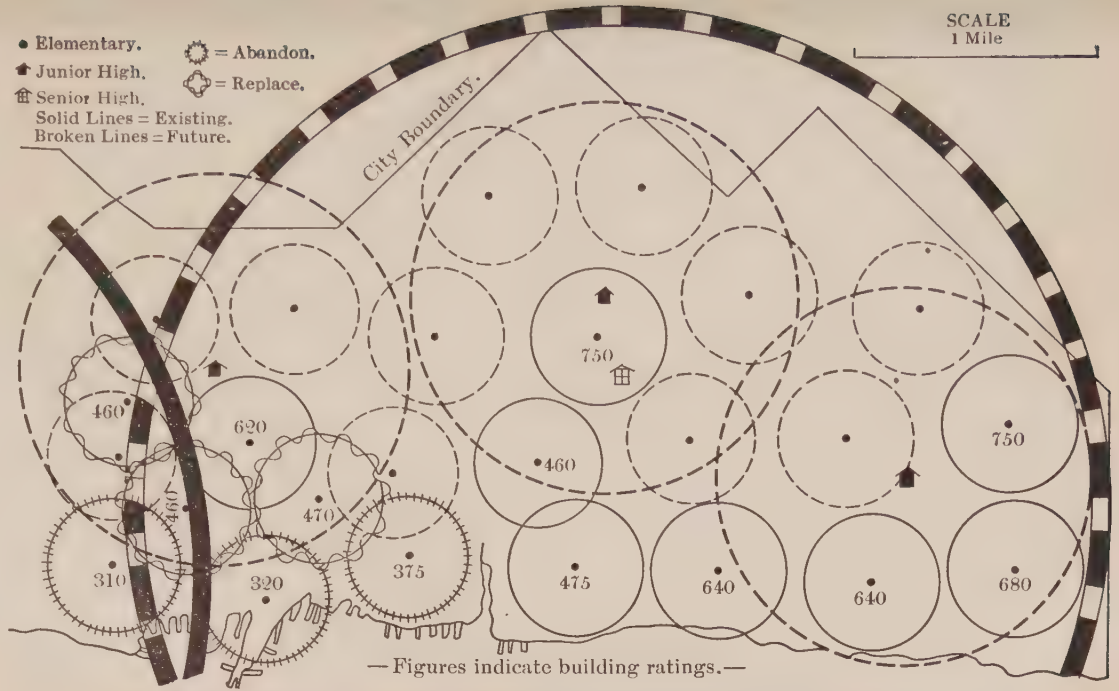


FIG. 38. RESULTS OF A SCHOOL-BUILDING SURVEY IN THE EASTERN HALF OF A SEACOAST CITY

city can carry out step after step of the program, as funds are available, and be constantly working toward an ultimate achievement that will be satisfactory, so far as we can now state the school needs of the future.

Figure 38 shows the results of such a school-building survey in the eastern half of a rapidly growing American city located on a bay shore. Elementary-school buildings are indicated by the light circles having one half mile radius, junior high schools by the medium-heavy circles having one and one half miles radius, and the high schools by the heavy circles having three and one half miles radius. These distances, for all except thickly built cities, are used as approximately standard. The ratings of existing buildings, on a Strayer-Englehardt scale, are indicated. It will be seen from the figure that three elementary-school buildings are recommended to be abandoned and disposed of soon, in part because the growth of water-front business will make them unnecessary, and in part because they are of an old type; three others are to be replaced by structures elsewhere, partly because they have been built too close to other buildings and are not needed, and partly because they are unsuitable in character, as shown by their low scores; the approximate locations of a number of new elementary-school buildings are indicated; and it is recommended that a new high school and three junior high schools be planned for this rapidly growing residential section.

Financing building costs. The call for a new type of school building to meet new educational needs, the demand for a reorganization of the educational system along new lines, the new standards in building construction, the greatly increased costs for material and labor, and the very rapid growth of our cities have all come at about the same time. The result has been that many cities have been hard pressed to provide the school buildings necessary for their work.

It used to be common, in many cities, to pay for their elementary-school buildings by a property tax levied at the time, and thus avoid the issuance of bonds and the incurring of a long-time debt. In relatively stationary or slowly growing cities this may still be done, though the practice is followed less generally to-day than formerly. In almost all rapidly growing cities the new school buildings, as well as many other public improvements, have had to be paid for by the issuance of bonds. This means the postponement of the debt to the future, leaving the generation now in school to pay the bill.

In the issuance of bonds, two main forms are used — the term, and the serial. Term bonds when voted by the people are issued for a term of years — twenty, thirty, forty — and are payable only at maturity. With serial bonds a certain number mature each year — in series — and are then paid off and canceled. With term bonds the interest charge remains the same each year; with serial bonds it is constantly decreasing.

The scope of this chapter. This chapter has dealt with the school plant, its development and organization and character. The subject is seldom taught in normal schools, except incidentally as a phase of schoolroom organization and management or of child hygiene. This is because the problems of school plant construction are the problems of the administrator, and not of the teacher.

In colleges and universities it is quite common to find courses on *Schoolhouse Hygiene*, or *School Buildings and Building Programs*, which make a study of the problems involved in schoolhouse planning and construction, including construction standards, types of buildings, unit costs, school housekeeping, and building surveys.

QUESTIONS FOR CLASS DISCUSSION

1. Show how the changing educational program has gradually forced the construction of new types of school buildings.
2. Show the truth of the statement that the modern schools described are more than just schools — that they are constructive institutions working at the problem of men-and-women building.
3. What does the median score (463) for the school buildings in 334 large cities indicate as to the lag of practice behind theory?
4. Show the difficulties faced by a city in reorganizing and reconstructing its school plant.
5. What is your estimate of the relative merits of paying by tax or bonding, in the erection of elementary school buildings? Would the situation be any different in the case of a large new high school?
6. Which is the better type of bond to issue? Why?
7. A good school building is sometimes said to be the combined work of an artist, an engineer, a physician and hygiene expert, a school administrator, and an economist. Indicate the function of each of these in planning and erecting a school building.
8. Just what do you consider should be the work of the State in laying down hygienic and constructional standards for school buildings, and in inspecting plans for new buildings?
9. Is it desirable to have a standard type of school building, or to encourage individuality in the appearance and construction of schools? Why?
10. If we agree on local liberty in exteriors, what interior features would you think it wise to standardize? List up half a dozen that you consider important.

EXERCISES AND PROBLEMS

1. Compare the elementary-school building to which you went with such a one as is shown in Figure 34, as to building, yard, play facilities, teaching facilities, and type of school program that might be carried out.
2. Visit some school building in your vicinity, and estimate its rating on a Strayer-Englehardt scale.
3. Indicate how the school shown in Figure 33 could be transformed to a platoon-type school without change in structure.
4. Watch the financial pages of some large city daily newspaper, and note the type and maturity of school bonds offered for sale from time to time.
5. Study some school-building survey report, and summarize the results and recommendations.
6. What are the essential requirements of a good school playground.

COLLATERAL READING

*Ayres, May, Williams, J. F., and Wood, T. D. *Healthful Schools.* (292 pp.)

Chancellor, W. E. *Our Schools; their Direction and Management,* chap. VII.

Cooper, I. F. *Report of Committee on School House Planning;* N.E.A., Washington, 1925. (164 pp.)

Curtis, H. S. *Education through Play,* chaps. VII, IX.

Dresslar, F. B. *School Hygiene.* (369 pp.)

Dresslar, F. B. *American Schoolhouses.* (132 pp., 267 plates.) Bulletin 5, 1910, U.S. Bu. Educ.

Dresslar, F. B. *American School Buildings.* (100 pp., 45 plates). Bulletin 17, 1924, U.S. Bu. Educ.

**School Survey Reports.* Use any available, and consult the chapter on buildings.

**School Building Surveys.* Use any available. The United States Bureau of Education has published a number, and many have been published by city boards of education.

CHAPTER XVIII

ADULT, VOCATIONAL, AND EXTENSION EDUCATION

In the chapters immediately preceding we have described the expansion of the school curriculum that has taken place, the reorganization of education made necessary by new educational conditions and needs, and the changed relations of the school to the community about it. In this chapter we wish to carry further this description, and show how the school has also extended its work into the fields of adult and vocational education as well.

Evening-school instruction. The first extension of the work of the public school came early in our educational history, in the provision of instruction in evening schools. What was probably the first evening school was organized at Providence in 1810, and by 1840 at least three American cities had made some beginnings in their establishment. In 1839 Ohio enacted the first general and permissive evening-school law, and was followed by Massachusetts in 1847. The first public evening high school was opened in Cincinnati, in 1855, and by 1870 half a dozen of our larger cities had provided evening-school instruction of high-school grade.

The original idea in providing evening schools was to meet the educational needs of young people who could not attend the day schools because they had to work. Once established, the idea was adopted by all our larger and many of the smaller cities. This type of schooling was for long regarded as a public necessity, that those who worked during the day might still be able to obtain the rudiments of an education in the evening school. Up to about 1900 these

schools continued much as they began. The instruction offered paralleled that of the day schools, though naturally much more limited in scope and amount accomplished.

With the enactment of the newer type of compulsory-education laws and their enforcement, which has come about almost entirely since 1900, the evening school has been materially changed in character and purpose. As the younger pupils have been forced into the day schools, and required to remain there until they are fourteen to sixteen years of age, the need for the older type of evening elementary-school instruction has largely disappeared. In consequence, such instruction to-day is largely confined to the provision of the rudiments of an English education for the foreign-born, to citizenship training for adults, and the offering of opportunities for further study to those who have missed some part of the regular day-school instruction. The work of the evening elementary school has accordingly been changed from the teaching of immature youth to the teaching of adults and illiterates, and the problems of discipline and the awakening of interest have largely disappeared.

The evening high school, too, has changed in character and attained new importance as a continuation and a vocational school. While continuing to offer cultural and college-preparatory subjects for those desiring them, the evening high school of to-day tends more and more to become a vocational school for instruction along scientific, technical, home arts, commercial, and industrial lines. Studies of this type are now in greatest demand, and many adults, engaged in business and industry during the day, now come to the evening school for the special and technical instruction they there receive in order to attain greater efficiency in the occupations in which they earn their living.

Part-time-schooling laws. As was stated in an earlier chapter, the tendency has been to increase the compulsory-

school age generally to fifteen or sixteen years. This has been done both in the interests of the child and of the State. The years up to sixteen at least are critical and formative years, during which the character of most young people is cast. The educational and social and moral guidance the school can extend during the period of transition is very valuable. The years from twelve or thirteen to fifteen or sixteen, or even eighteen, are likewise very important as training years. With the old apprenticeship system almost gone, industries becoming more and more specialized each year, the increasing difficulty the untrained worker finds in securing labor in any occupation involving skill, and the ability later in life to change from one occupation to another becoming more and more limited, the need for additional school training has become generally more apparent. The industries, finding the labor of unskilled youths unprofitable, either discard them, pay them small wages, or establish schools to furnish them the training necessary. As only the larger employers can or will establish these special schools, and as the cost for such instruction puts a handicap on such employers as do provide it, general part-time-schooling legislation has become essential to protect youths from exploitation and the State from danger.

Beginning with Wisconsin, in 1911, more than half the States have since enacted part-time-school laws, under which all youths must either attend regularly a day elementary or secondary school up to sixteen or seventeen or eighteen years of age, if unemployed; or if employed under working permits, must attend a part-time continuation school for from four to eight hours a week, and usually for the same length of time that the regular schools are in session. For such youths, who have gone to work with their schooling incomplete and inadequate, the school attempts to provide many forms of specialized instruction, and at the same time to give

them the moral and social and guidance services of the school. Such instruction is even more in the interests of youth and society than in the interests of industry, useful as it may be to the latter.

The courses offered are designed to meet individual needs, the work is arranged in short unit courses, and the purpose is to train in needed skills. In addition, instruction in oral and written English, and instruction in health and in the duties and responsibilities of citizenship are given, and individual counsel and vocational guidance are provided. When fully organized such instruction aims to meet the conditions of seasonal and irregular employment, and even to provide for alternate weeks at work and at school.

The size of the task facing us presents great difficulties. Our schools have not as yet organized the work as it will in time be organized, teachers of the kind needed are not as yet easy to secure, and but a small percentage (ten per cent in 1922) of the number of children fourteen to seventeen years of age not attending school have as yet been reached. Another difficulty lies in the very wide variations in individual needs, requiring such widely differentiated courses that small schools cannot provide them. Despite these difficulties, though, the part-time or continuation school is rapidly developing (53,000 enrolled in 1918, 228,000 in 1922) as a service agency both to youths and to industry, and is enlisting the hearty support of many large employers of youthful labor.

Americanization and citizenship classes. The World War brought forcibly to the attention of the American people the fact that they had for long been very lax in the matter of the admission to citizenship of those who come to us from other lands. While doing good work in providing schooling for the children of these peoples, we had almost entirely neglected both the parents and those of the children beyond

the compulsory school-attendance age. We saw, as a result of our difficulties during the War, that national safety and national welfare alike demanded that we make an organized effort to educate the foreign-born in the principles underlying our form of government and in the use of our common English tongue.

Beginning as a war measure, Americanization soon attracted national attention. Since the War, schools generally have organized such classes and have made a determined effort to instruct the foreign-born with a view to their assimilation into the national life. A number of our States have enacted laws making Americanization work a general State undertaking, and special courses to train teachers for the work have been organized in our normal schools and colleges. During and immediately following the War, fully half the States enacted laws forbidding the foreign-language school, though such laws were afterward, in a curious decision by the United States Supreme Court, declared to be unconstitutional as in contravention of the principle of religious liberty. The enactment of legislation subsequently restricting immigration, and shifting the source of our future immigrants from the South and East of Europe to the North and West — by making the quota two per cent and basing it on nationalities here in 1890, instead of 1910 or 1920 — promises to give us an opportunity during the coming decades, if smuggling across our borders can be held down, to make substantial headway in the assimilation of those peoples now here and the much smaller numbers who will come.

The work of Americanization and citizenship training is of very large importance to us as a Nation, and much ought to be made of it by the public schools and by the State. It represents another form of extension of the public school service, and another type of the new social relation of the

school. By making the school the interpreter of American ideas and ideals to the foreign-born, by winning allegiance rather than trying to compel it, and by making the entry to citizenship through these school classes, a most important political as well as educational service can be rendered. Our States should make the completion of an Americanization and citizenship course of study, involving learning the use of English and becoming familiar with American institutions, a prerequisite to naturalization by a court. The ceremony of naturalization, too, should be one of dignity and respect, with the school presenting and standing sponsor for the class about to be naturalized.

The elimination of illiteracy. Closely connected with the work of Americanization and citizenship training is the elimination of illiteracy throughout our land. During the War the inability to read and write English was brought forcibly to our attention by the conditions found among the army recruits. Despite the important work done by the army-camp training schools during the war period, and the citizenship and night-school classes organized afterward, the United States Census of 1920 revealed that we still had almost five million (4,931,905) illiterates, ten years of age or over, in our total population, and almost equally distributed among males and females. This was 6.0 per cent of our total population — a high average for an intelligent nation. Of the population twenty-one years of age or over, 7.1 per cent were illiterate. Distributed by groups, 3.9 per cent of the native whites were illiterate, 13.7 per cent of the foreign-born, and 27.4 per cent of the negro race. In six States (not the same in each case), the illiteracy among the native whites exceeded 10 per cent, among the foreign-born 25 per cent, and among the negro race 30 per cent. In four of our cities of a hundred thousand inhabitants or over, the illiterate adults exceeded 10 per cent of the population, and in nine

cities the illiterate foreign-born ranged from 20.2 per cent to 35.9 per cent. It is the foreign-born whites of the North Atlantic, North Central, and Western States, and the negroes and Mexicans of the South and Southwest, who today constitute the great bulk of our illiterates. Illiteracy, like citizenship, is a national problem.

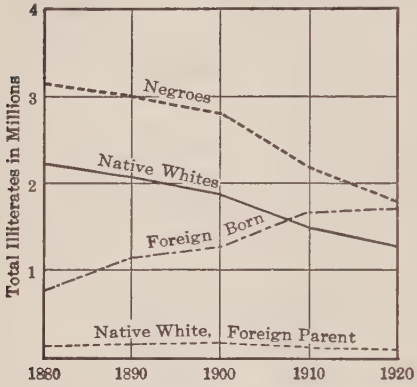


FIG. 39. WHO CONSTITUTE OUR ILLITERATES

The rigid enforcement of the compulsory-attendance laws can in time stamp out illiteracy among the children and the youth, but only the establishment of evening-schools and other special types of instruction — logging-camp schools, mine-schools, schools for migratory laborers, etc. — for adult illiterates, as well as the enactment of part-time schooling laws for illiterate minors, can really reach the problem in any effective manner. Many of the older age-groups will always remain unable to read and write the English language.

One effective means for reaching those over twenty-one years of age, and particularly the younger groups, is through the voting laws. The State of New York has recently handled the problem in a most intelligent manner by requiring certificates of literacy — which can be issued only by the school authorities and under conditions prescribed uniformly for the State by the State educational authorities — as a prerequisite for registration for voting. A sixth-grade standard of proficiency is required, and in lieu of

evidence of having gone this far in school, a literacy test, prescribed by the State Department of Education, must be passed. For those who do not care to become citizens this means is of course ineffective; for such classes, only social and economic pressure will be of any value.

General adult education. Compared with England, Denmark, and France, the United States has as yet made only a beginning in general adult education, though a very respectable beginning it is. What has been done, until recently, has been largely along the lines of citizenship classes, evening lectures at the schoolhouses, farmers' institutes, and university extension work by our State institutions. The recent marked change in evening-school instruction, from general and cultural studies to scientific and technical and vocational work, has produced perhaps our most successful results with those past the age for attendance at the day schools.

The coming of the community-center schoolhouse, with its auditorium, branch library, and better teaching facilities, is likely to lead to much new instruction by the school in subjects that the people of a community desire to know about. On the other hand, the reading habit of our people, the popular magazine, the accessibility of libraries, the phonograph, and particularly the radio are forces tending to diminish the demand for actual school instruction for adults. The increasing need for an extension of rational thinking among our people along social and economic and political lines will, on the contrary, tend to emphasize the importance of the school as a community center for the discussion of such questions. The growth of associations, especially among the workers, organized to extend education among adults, also will give importance to the formation of classes in the schools under public auspices, rather than the continued dependence on private-controlled tuition instruction for many forms of adult education.

University extension. Aside from the work of a technical and vocational nature done in our evening schools which we have just mentioned, and the agricultural extension work which will be described a little further on, probably the most successful work now done among adults is the work in university extension. By the organization of study centers, lecture courses, and scientific and technical instruction at many points within a State; by traveling exhibits and traveling libraries; by correspondence study; and by short courses conducted at public centers, our universities and agricultural colleges have recently begun an extension movement of large possible usefulness to the people of the State who have not been able to go to college. A number of our State universities have recently rendered important service in this new direction, and have enrolled thousands of extension students in all parts of the State. This new work can be made of the greatest value to the people in elevating standards, developing public opinion, diffusing general and special knowledge, and in building up a more intelligent democratic life.

In England, extension work has been under way for almost half a century; with us it is a much more recent development. In this country it probably dates from the organization of the Chautauqua movement, in 1885, though the first State university to begin the work was Wisconsin, in 1892. Up to 1906, when Wisconsin reorganized the work under a University Extension Division, but little had been done with the idea anywhere. During the next decade some fifty institutions took up the work, and during the past decade it has been very widely adopted as a part of the educational program of our States.

Organization of vocational instruction. Though the leading nations of western Europe have been engaged in the development of systems of vocational education for more

than half a century, the movement attracted almost no attention in the United States until after 1900. The first decade of the present century was then given over to a discussion as to the need for and an awakening of interest in such instruction, and the second decade to making the beginnings of what promises to be, before long, a great national system of vocational training.

The first trade school in America was organized privately in New York City, in 1881, and by 1900 about a half-dozen such schools had been established in various cities. In 1906 Massachusetts provided for a State Commission to study the matter, and in 1907 Wisconsin enacted the first general permissive trade-school law. After a number of efforts in Congress, an investigation as to needs by a Presidential Commission was provided for. This Commission reported (1914), among other things, that there were in this country 25,000,000 workers, eighteen years of age or over, engaged in farming, mining, mechanical pursuits, and trade and industry, not ten per cent of whom had had any vocational training for their work. The Commission estimated that, if vocational education were to increase their earning power only twenty-five cents a day, it would mean $6,250,000 a day and $1,875,000,000 a year in added wages for the Nation. On the recommendation of this Commission Congress enacted, in 1917, the so-called Smith-Hughes Vocational Education Act.

This Act provided for Federal aid to the States to help establish and maintain instruction in agriculture, home economics, industry, trade, and commerce. The instruction must be given in the public schools, must be for those over fourteen years of age, may be given in either full-time or part-time classes, and must be primarily for boys and girls preparing to enter or who have already entered a trade or a useful industrial pursuit. The Federal aid, which reaches a

maximum in 1926, will amount to $3,000,000 a year to the States for instruction in agriculture, a similar amount for instruction in trade and industrial and home-economics subjects, $1,000,000 a year for the training of teachers to do the work, and $200,000 a year for investigations as to what should be done. The States were to double each Federal dollar received. So valuable has the work proved itself to be in the short time it has been under way that the States are already spending two dollars to the one received from the Federal Government, and a bill is before Congress to add $3,000,000 more annually for home economics alone.

Types of vocational instruction developed. In organizing the work, each State was left free to develop its own plans, and to adjust the instruction to local needs. So far courses have been worked out for more than one hundred different occupations into which youths enter. In the trade and industrial field, three types of instruction have been aided, namely:

(1) The all-day industrial or continuation school, usually two years in length;
(2) The part-time day school work for those already employed; and
(3) The evening school.

In the day continuation schools a sound preparation for the skilled occupations is given, as well as general mechanical insight and industrial outlook. A large number of different types of continuation schools probably will in time be developed in our cities, based on the pre-vocational work of the junior high school as preparation. The part-time classes have the same aims, but can give much less extensive instruction because of the few hours per week the pupils can attend. The evening schools aided are of two kinds: (1) those for advanced workmen who need special instruction in subjects related to what they are doing — such as mathe-

matics, drawing, science — to increase their efficiency; and (2) those for helpers and assistants who need training in skill in tool work and in the fundamental principles underlying the work they are trying to do.

In commerce and commercial pursuits, the work of the bookkeeper, clerk, stenographer, typist, auditor, and accountant have been the main lines along which instruction has been directed. In home economics — a rapidly ex-

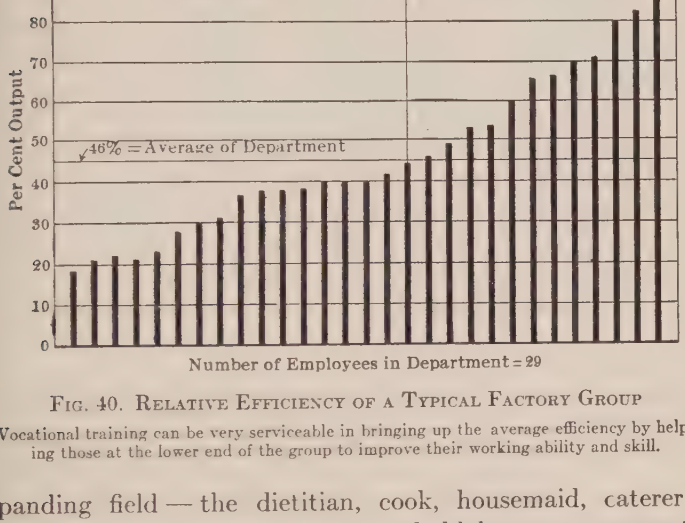


FIG. 40. RELATIVE EFFICIENCY OF A TYPICAL FACTORY GROUP

Vocational training can be very serviceable in bringing up the average efficiency by helping those at the lower end of the group to improve their working ability and skill.

panding field — the dietitian, cook, housemaid, caterer, chef, institution manager, and household decorator represent the more important subjects. In agriculture the work of general farming, orcharding, dairying, poultry-raising, truck-gardening, bee-culture, horticulture, and stock-raising are so far the main lines of effort. In the regular high-school instruction in agriculture much "home-project work" is used with boys and girls from fourteen to eighteen years of

age, and close contact with the home farm is maintained. Part-time classes have also been organized in agricultural work, usually as "short-course" and off-season instruction, for those not attending the day high school instruction.

General results of the work so far. An outstanding feature of this recent development in education along vocational lines has been the recognition that it is a task too big and too important for the school alone, and the increased willingness of business and industry to coöperate in the work. Especially have the large employers appreciated the importance of the general training, wider skills, and better attitudes toward work which the school gives to the workers. Still another outstanding development is the accumulated evidence of the importance of a closely connected vocational guidance and placement and follow-up service for young workers. More and more is this service becoming an integral part of the work of the day continuation and part-time schools, and vocational counselors are being placed in charge of it. Still another notable feature has been the general recognition that the education given is after all in the nature of a national investment which will yield dollar-and-cent dividends year after year through the progressive increase in skill and industrial efficiency of labor. The cost for providing this training is now being recognized, too, as a public charge fully as just and proper as is cultural or professional education.

So promising has the work been that in a decade or two we may expect to have a truly national system of continuation-school education for the workers of our Nation — one that will increase their productive efficiency, enable industry to raise their wages, allow them to purchase comforts and happiness beyond the possibilities of the workers of most nations, greatly augment the national wealth, and at the same time produce a better type of citizenship for our country.

Agricultural and home-life extension work. The Federal Government, through other grants of money to the States, has been responsible for the development of another type of educational service of very large significance. In 1914, Congress enacted the so-called Smith-Lever Coöperative Agricultural Extension Act. This provided for the inauguration of what must ultimately prove to be a most important national movement for extension-education among those who live in small towns and in the rural districts. A grant was made of $480,000 of national aid per year to the States for printing and distributing information, and $4,100,000 per year to be distributed to the States, in proportion to the number of rural inhabitants in each, for rural extension work aiming at the improvement of agriculture, home economics, and rural home life. The work was to consist of instruction in these subjects to persons not attending colleges, and the printed material to be distributed was to supplement the actual instruction.

The conduct of the work was placed with the agricultural colleges, and under the provisions of this law a wide variety of educational undertakings has been inaugurated in the States. The farmers' institutes have been taken over, county farm-agents have been appointed, home-demonstration workers have been employed, and boys' and girls' club-workers have been put at the work of organization. About two thirds of the rural communities capable of such development have been organized and workers put into them. The activities of these extension workers are wide in scope and varied in character. The county agents live in the rural districts, advise the farmers, and carry on demonstration projects in crop production of various kinds — pig-raising, dairying, poultry-disease control, rodent control, orchard work, etc. Much special work has been done in organizing the negro farmers of the South, and farmers' institutes are held

all over the Union. The home workers give demonstrations in food selection and preparation, child-care, clothing, household management, school lunches, and similar work. Clubs of many kinds for boys and girls have been organized — canning clubs, animal-raising and crop-growing clubs, health clubs, etc. It is estimated that these extension workers now come into instructional contact yearly with over two million farmers and three quarters of a million farm women, and over a half-million farm boys and girls in the club work.

The far-reaching importance of this new educational undertaking for the improvement of crops, stocks, rural home life, and child life among our rural population can hardly be overestimated. It is a type of the kind of work the Federal Government might well stimulate the States to carry on along many other lines of human-welfare service.

Library extension. Another form of extension service, that has developed very rapidly within the past twenty-five years, is that known as library extension. This has been of special importance to those of our population living in small villages and on the farms. It has taken two main forms in its growth.

The first form is that in which a central State library organization makes up package libraries for loan. These are boxes of books, either general in character or more or less specialized, which are loaned to any group of citizens who apply for them and agree to be responsible for their return. These collections are placed in stores, post-offices, schoolhouses, or private homes, and the people of a village or rural community may come and look them over and borrow from the box. In the other form the county library becomes the unit of organization, and then in turn establishes branch libraries throughout the county — in towns, at the consolidated schools, or elsewhere. The State and county libraries work in close coöperation to supply library service

to the people of the whole State, outside of the cities having library facilities of their own, and even with these friendly working relations usually are maintained.

This service is still new, in but few States has it as yet been well developed, and the saturation point is far from being reached. There is no reason, though, aside from the costs and the organization necessary, why good library service should not be as common for our people as are schools for their children. The ultimate end of the library-extension idea is a large central State library, a series of city and county libraries, and branch county libraries wherever they can be useful — all working in close coöperation. The high schools, the consolidated rural schools, and the town schools could be made branches from which the library service radiates to both the pupils and their parents. It then should be made easy for any citizen, anywhere in the States, to borrow, through the nearest local branch or by rural parcel post, any loanable book in either the county or the State library. This is the desirable goal for this particular form of educational extension. The public library thus serves as a sort of continuation school for those who have finished their school life, and who wish to apply the ability to read which the school has given them in a way that is a worthy use of their leisure hours.

The scope of this chapter. In Chapter XVI we described the many new social relations which our schools have assumed during the past quarter-century, by way of increasing their service to both children and parents, and in the next chapter we showed how all these new relations had involved the creation of a new type of school plant to house the many varied activities of the school. In this chapter we have carried the same idea still further, and have pointed out the new projection of the school into the fields of adult, vocational, and extension education, and the place of these in a

State-wide — one might even say a Nation-wide — plan for the public instruction of a people.

The extensions of public instruction considered in this chapter would be studied more in detail in a number of college and university courses. The one course which would include a consideration of them all, as phases of a State's system of public instruction, would be a course on *State School Administration*. Such a course is now offered by most university schools of education. Portions of what this chapter has dealt with would be taken up in more detail in such college courses as *Americanization Work*, *Education for Citizenship*, *Adult Education*, *Vocational Education*, and *Rural Life and Education*. The extension service of the library would be dealt with in a course for the training of library workers.

QUESTIONS FOR CLASS DISCUSSION

1. Show how the character of evening-school instruction will vary with the enactment and enforcement of good compulsory-education laws.
2. Show how part-time-schooling laws are as much in the interests of the child and the State as of industry and trade, and *vice versa*.
3. What do we mean by the old apprenticeship system being almost gone?
4. Show the relations between the breakdown of the old apprenticeship system and the increase of the compulsory school-attendance age.
5. In what ways are over-age and retarded children being prepared by book-type education to join the ranks of the unsuccessful and dissatisfied workers, and how would industrial and vocational education help them?
6. Why must the part-time instruction be so individualized, from both an educational and a vocational point of view?
7. Illustrate what is meant by meeting the conditions of seasonal and irregular employment by part-time instruction.
8. Indicate the educational consequences of accepting the idea that all children are to be given as good an education as their particular needs require.
9. Show how the possession of a common language, and a common ability to use that language in written and spoken form, is a large element of safety for any people.
10. Are the citizenship classes engaged in a work of assimilation or amalgamation? Why?

11. Show the truth of the statement that illiteracy and citizenship are both national problems, and not state problems only.
12. What is your opinion as to the likely effect of the radio on educational extension: (*a*) at the community schoolhouse, by lectures and classes; and (*b*) university extension work? Why?
13. Turn to Figure 28, page 293, and show just where the continuation, trade, and industrial schools would be on the diagram.
14. Would you say that the expenditure of public money for library extension is as justifiable as an expenditure for: (*a*) university extension; (*b*) a health service; (*c*) vocational education?

EXERCISES AND PROBLEMS

1. Investigate the types of instruction offered in some evening school you can study, either by visitation or by printed outline of work, and analyze them as to character and purpose.
2. Do the same for part-time classes.
3. If possible, arrange to be present at a naturalization proceeding before some court, and report on the nature of the preparation of the candidate and the ceremony.
4. Work out just what a sixth-grade standard of proficiency would mean, by minimum amounts in the different school subjects, as a standard of literacy for leaving school and for voting.
5. Look up the work, actual and proposed, of the Workers' Educational Bureau, and any other Associations for Adult Education. Just what do these organizations plan to provide, and how?
6. Write to the Extension Division of your State University, or State Agricultural College, or both, and ask for the list of university extension lectures and courses available, and information as to the terms on which these may be had. Examine the offerings, estimate their usefulness as measured by the last sentence of the first paragraph on page 344.
7. Ascertain the nature and cost of the Smith-Hughes work in your local high school.
8. Write to your State Agricultural College for printed matter as to the Smith-Lever extension work it is directing in your State, and analyze the work offered.
9. What is the status of library extension in your State?

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CHAPTER XIX

COLLEGE AND UNIVERSITY EDUCATION

The university an ancient institution. Excepting only the Jewish Synagogue and the Catholic Church, the university is the oldest organized institution of our Western civilization. Nearly seven and a half centuries it has existed, grown and developed, and made its contributions to the advancement of the civilization of the race. Developing, here and there, out of some cathedral or monastery school of the early Middle Ages, and as an outcome of the superior teaching of some early scholar, the university organization gradually took shape, by the beginning of the thirteenth century, as a privileged association of scholars and teachers gathered together for the purpose of discussion and study. The university organization soon superseded the monastery as the place where knowledge was preserved and transmitted, and in more recent times has become a place where it is advanced as well. In an age of oppression the universities stood for freedom, and in an age of might they began the substitution of reason and law for brute force. Slowly, generation after generation and century after century, they have made their contributions to the progress of mankind.

Before America was discovered the university was busily engaged in doing its work, and long before America had been settled the university idea had been carried all over Europe. By the time Columbus sailed in search of a new sea passage to India, eighty universities had been established in European cities; by 1600 the number had been increased to one hundred and eight; between 1600 and 1700 twenty-one more were created; and during the eighteenth and nineteenth

centuries forty more were established in Europe alone. Many of these are among the most celebrated places, to the scholar and the student, to be found anywhere in our Christian world, and he visits them with a feeling that he is treading on hallowed ground. In their cloisters the leaders of the ages were trained, and out of their lecture-rooms came the men who ushered in the modern spirit and paved the way for the civilization we of to-day enjoy.

Early American beginnings. Many of the early settlers who came to America were men who had been educated at one or the other of the two old English universities, and one of their early interests in the new land was in learning and religion. Many of the early Massachusetts colonists had studied at Emmanuel College at Cambridge, and they hoped to see the creation of a somewhat similar college in the new colony. Sixteen years after the first landing at Plymouth, Harvard College was established in the wilderness "to advance learning and to preserve it to posterity," and to prevent an illiterate ministry from being left to the churches "when our present ministers shall lie in the dust." In 1693, a second college, William and Mary, was established on the Virginia coast; in 1701, the founding of Yale, in Connecticut, made a third college for the colonies; and in 1746, Princeton, in New Jersey, made a fourth. Five others — Pennsylvania, Kings, Brown, Rutgers, and Dartmouth — were founded during the colonial period of our history. The religious purpose was dominant in the founding of each institution, the prime object being to train up a learned and godly body of ministers for the churches.

All these early colleges were small. During the first fifty years of Harvard's history it never had over twenty students, and the President did all the teaching. As late as 1815 Harvard graduated a class of but 66, Yale of 69, Princeton of 40, and Pennsylvania of 15. Up to about 1800 the in-

struction in all the colleges was much the same. The students all studied the same subjects, which were: Greek, Latin, Hebrew, mathematics, oratory, general history, and a little book-science during the first three years; and during the last year, in preparation for their work in the ministry, ethics, philosophy, Christian evidences, and religion. Though fifteen additional colleges were founded in America by 1800, it has been estimated that, by that date, the two dozen American colleges then existing did not have all told over one hundred professors and instructors, somewhere between one and two thousand students, and not over a million dollars' worth of property. None of the twenty-four colleges admitted women in any way to its privileges.

The beginnings of the State universities. In the first important sale of public land, in the new North-West Territory, in 1787, Congress granted two whole townships to the purchasing company "for the purposes of a university," and on the admission of Ohio as a State, in 1802, two additional townships were granted for another similar institution "in the district of Cincinnati." The first of these grants formed the original endowment of Ohio University, opened in 1809 at Athens, and the latter the endowment of what in time became (1824) Miami University, at Oxford. These were the first State universities in the new West. This grant of two or more townships of land for "a seminary of learning," or "State university," begun in the case of Ohio, Congress has continued with the admission of each new State, and these township grants mark the beginnings of the State universities which were created in all the new Western and Southern States.

By 1825, seven States — Virginia, Georgia, North Carolina, South Carolina, Ohio, Indiana, and Michigan — had laid the foundation of future State universities, and by 1850, fourteen States and one Territory (Utah) had established

State universities and opened them for instruction. Though the great period of State university founding came after 1860, and of State university expansion after 1885, the beginnings of these institutions date back to 1795, when the University of North Carolina, chartered in 1789, opened its doors for instruction. For a long time small, politically controlled, afflicted with violent denominational controversies, poorly supported by the States, much like the church colleges about them in character and often inferior to them in quality, one by one the State universities have freed themselves from denominational restrictions and political control and set about rendering the service to the State which a State university ought to render.

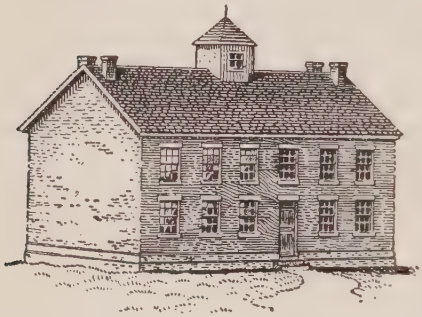

FIG. 41. WHERE THE UNIVERSITY OF INDIANA BEGAN INSTRUCTION, IN MAY, 1824

With one professor and ten students.

The period of establishment. Up to 1860 was preëminently the period of the denominational college, and during this early period the churches rendered a great service to the new Nation in providing opportunities for collegiate instruction. Of the 246 colleges that had been founded in the United States up to the close of the year 1860, only 17 were State institutions. In all, something like 500 denominational colleges and universities have been founded in this country to date, in response to that strong early religious impulse which called for religion and learning to go hand in hand.

The period up to 1860 also marks the establishment of the

first colleges for women, and the opening up of some of the earlier institutions to women as well as men. Emma Willard's Seminary for Girls, at Troy, New York, opened in 1821, and Mary Lyon's Seminary at Mount Holyoke, Massachusetts, opened in 1837, mark the beginnings of collegiate education for girls, and the opening of Oberlin College (Ohio) to women, in 1833, was the first step in their admission to the older institutions. As late as 1840, but 7 of the 98 collegiate institutions established by that time admitted women, but by 1860 the number had risen to 61. After the Civil War the colleges began to open their doors somewhat generally to women students. Every State west of the Mississippi River, except Missouri, made its State university co-educational from its first opening, and of those east of the same river practically all have followed the lead of Iowa (1856), Indiana (1868), and Michigan and Illinois (1870) in opening their doors freely to women students.

Before 1850 the colleges quite generally offered but one course of instruction. This was based on Greek, Latin, and mathematics, was known as the classical course, and led to the A.B. degree. In 1851 Brown offered a parallel course, omitting Greek and emphasizing more modern studies which led to the Ph.B. degree. The same year Harvard organized a course of instruction in scientific studies leading to the degree of B.S., and was followed in so doing the next year by Yale. Michigan did the same in 1853. By 1880 colleges generally were offering three or four parallel courses, leading to different degrees, and soon afterward the larger universities began to reorganize their work by subjects, with an increasing number made elective. Graduate instruction was in time organized, leading to the degree of A.M. and M.S., and in 1851 the first Ph.D. degree was conferred by Yale.

Rise of professional instruction. The colonial colleges, as has been stated, were founded primarily as training schools

for the ministry. This continued for long to be their main work, and in this the denominational colleges shared. It was not until 1812 that theology was anywhere separated into a special professional school, the first to take this step being Princeton, followed by Harvard in 1819, and by Yale in 1822.

The first professional instruction of collegiate grade to be begun in America was in medicine, which was provided for at Pennsylvania, in 1765, Columbia in 1767, and Harvard in 1782. Out of instruction in medicine came chemistry, the mother of science instruction. The first American professorships of chemistry were established at William and Mary in 1774, Princeton in 1795, Columbia in 1802, and Yale in 1803. The first American chemistry laboratory dates from 1846, at Harvard, and the first to be open to students anywhere from 1826, at the University of Giessen, in Germany.

The first law school in the United States was organized in 1784, by a judge at Litchfield, Connecticut. This he conducted until 1833, and many students went there for training in the law. The first university instruction in law was in the University of Maryland, in 1812, and other law schools were opened at Harvard in 1817, Yale in 1824, and Virginia in 1826.

The first technical schools were West Point, established in 1802, and the Rensselaer Polytechnic Institute, established in 1824. The first college of dentistry was opened in Baltimore in 1839, and the second in Cincinnati in 1845. The first college of pharmacy was established at Philadelphia in 1822. While a few lectures were given earlier, the first professorship in education was established at the University of Iowa in 1873, followed by Michigan in 1879, Wisconsin in 1881, and Johns Hopkins and the University of North Carolina both in 1884. These five mark the beginnings of university instruction in a subject that is to-day taught in

departments and schools of education in some five hundred colleges and universities throughout the country.

The new Land Grant Colleges. The greatest impetus to the development of professional instruction in this country came with the creation of what are commonly known as the Land Grant Colleges, under the provisions of the so-called Morrill Act of 1862. By the terms of this law each State in the Union was given 30,000 acres of public land, for each Senator and Representative in Congress, to endow a college for the teaching of agriculture, mechanic arts, and military tactics. A total of 11,367,832 acres of public land — an area one half as large as the State of Indiana — was given to the States for this purpose. Money grants were later added to provide for an experimental and research station in connection with each, and to help maintain the instruction therein. Fifty-one States and Territories — counting Alaska, Hawaii, and Porto Rico — now receive yearly money grants from the Federal Government to help carry on instruction and research along the lines mentioned. Eighteen States added the land grant to the endowment of their existing State universities and combined the two institutions; three of the Original States (formerly five) gave the grant to private institutions to handle; and the remainder established separate agricultural and mechanical colleges. In the Southern States two colleges, one for white and one for colored students, usually were established.

While the monetary returns from these grants were small, the educational results have been very important. Probably no aid for education given by the National Government has proved so fruitful as have these grants of land and subsequent grants of money for instruction in agriculture and the mechanic arts. New and vigorous State universities have been created, old universities have been awakened to a new life, agriculture and engineering have been de-

veloped as new learned professions, and the States have been so stimulated to make large and rapidly increasing appropriations for the maintenance of their universities that the State institutions — once feeble copies of the denominational colleges — to-day overshadow all but a few of the largest of the older organizations. The far-reaching importance of the Morrill Act of 1862, so named from the Vermont Senator who framed and sponsored it, is not likely to be overestimated.

Great recent expansion of the university. With the rapid increase in the quantity of knowledge that the past seventy-five years in particular have brought about, the subdivision of old subjects of study into many new ones, and the taking-on of new types of instructional service by the universities, the old simple collegiate institution has largely disappeared, and in its place has come the complex modern university with its chairs, departments, schools, colleges, and divisions. Law, medicine, pharmacy, dentistry, foresty, mining, architecture, engineering in its many branches, agriculture, household arts, fine arts, music, journalism, education, social sciences, and business administration have all been added to the old college of liberal arts. Still more, a large graduate division, a university-extension division, and a summer session have also been added. An annual appropriation of five to six million dollars for maintenance alone is now being asked for by some of the larger State universities, while annual expenditures of one to two million dollars are very common. In addition, other millions are being spent for new buildings and grounds.

All this remarkable development indicates the assumption of many new functions by the university for the welfare of the State. That our States have appreciated these new services is well shown by the increased legislative appropriations for the State institutions; the great addition in

the number of university students; the endowment of new universities, such as Johns Hopkins, Tulane, Chicago, and Stanford, to assist the State in its work; and the greatest number of gifts of money ever given to aid higher education anywhere in any age. In no other land has the university become such a great service institution for the people, and in no other land has the State attempted to supply free or almost free tuition for the youths of the State who attend.

TABLE III. INCREASE IN STUDENT BODY OF A FEW STATE UNIVERSITIES

UNIVERSITY	1885	1895	1905	1915	1923
*California	197	1781	3294	6434	14,061
*Illinois	247	814	3597	5439	9,285
Michigan	524	2818	3832	5833	8,703
*Minnesota	54	2171	3633	4484	8,586
*Ohio	64	805	1835	4599	7,911
Texas	151	630	1235	2574	4,691
*Wisconsin	313	1520	3010	5128	7,241

* The State University and the Land Grant College are combined in these States.

The establishment of the free public high school and the State university represents the crowning achievement of those who struggled to found State supported educational systems which should be fitted to the needs of great democratic States. Probably no other influences have done more to unify the American people, reconcile diverse points of view, eliminate State jealousies, set ideals for what ought to be done, and train leaders for the service of the State and the Nation than have the colleges and universities scattered over our land. They have educated but a small percentage of our people, to be sure, but they have trained most of the leaders who have guided our democracy since its birth.

The recent junior college development. In Chapter XV (page 290) the recent junior college development was described, and the place of this new institution in the educa-

tional organization of a State was shown in Figure 28, page 293. By this is meant the upward extension of the high school to include the thirteenth and fourteenth years of instruction, or the lower half of the old college course. This development to-day seems to be so well established in the United States that it may be accepted as a certain ultimate expansion of American public education. The extremely rapid growth of the universities, the great cost and difficulty of duplicating them, the fact that sixty per cent of the student body is in the two lower years, and the further fact that the subject-matter of instruction in these two years represents a continuation of the general and cultural work of the high school — these and other considerations are directing much attention to the junior college idea. This means the eventual decentralization of the freshman and sophomore years, the establishment of such instruction at a number of places in the State, and the development of the central university then as a great group of professional schools beginning at the junior year.

This development would carry collegiate instruction to numerous centers in the State, would tend to end general collegiate and cultural training at twenty instead of twenty-two as at present (See Figure 28), and would enable the university to concentrate its efforts on research and the more costly types of professional instruction. The general result would be to bring to many youths, who cannot now afford to go for it, opportunities for at least as good a type of collegiate education as our fathers enjoyed. The development now taking place is at present largely a local one, but in time this may be expected to pass under State direction and control. In time there would result an organized State system of junior colleges, such institutions being located at from ten to forty places in the State, offering good collegiate training in many lines, and preparing for many

types of professional and public service as well as for a high grade of citizenship. These institutions should also become centers from which most of the university extension work would in time be done. In many of the larger cities these institutions will in time develop into municipal colleges of the four-year type.

The normal school and teachers college development. While a few institutions intended to give some training for teaching were established earlier, the first modern normal school was worked out by Pestalozzi, in Switzerland, near the beginning of the nineteenth century. Building on his work, the Germans established the first State normal schools (1809) in history to train teachers for the new State school system they were then creating. France established a Superior Normal School, in 1808, to train professors for the higher schools, and after 1830 a number of normal schools to train teachers for the elementary schools of that country. While we obtained some of our ideas and inspiration for normal-school development from German sources, we had ourselves for long been at work on the idea of teacher training. In 1823, the first normal school in the United States was opened under private auspices (page 13); in 1827, New York State began aid to the academies to help them train teachers; and in 1839 the State of Massachusetts was induced to duplicate a gift of $10,000 to create the first State institutions for the training of teachers to be established in this country. New York followed in 1844, and Connecticut and Michigan in 1849. To-day there are approximately three hundred and fifty State and municipal normal schools and teachers colleges — not counting departments and schools of education in colleges and universities — engaged especially in the work of training teachers for service in the public schools.

Originally the normal school was established on the same

entrance basis as the high schools. Pupils entered from the elementary schools and were given a three-year, and later a four-year course, largely academic in nature. Up to about 1875 there was very little of a professional nature to teach. The first professional book in English published in America (page 13) did not appear until 1829; it was 1835 before the educational journal really got started, and but few professional books were printed in this country before 1850. It was not until the introduction of the new Pestalozzian teaching procedures, after 1865, that educational books began to appear in any number, or the normal schools had much of a professional nature to teach. This, with the slow development of the high school before about 1880, caused the normal school to remain for long essentially a local high school, with some professional work attached.

After about 1900 the normal schools moved rapidly to a higher entrance basis, in many cases requiring high-school graduation, and the professional course of training was reduced to two years. Since about 1920 the tendency has been marked to expand the professional courses again to three or even four years, to add new instruction of a collegiate nature, to change the name to Teachers College, and to give a degree (usually B.S.) on the completion of the course. This recent development has come in part as a result of the changing character of the elementary-school course itself, it being felt that a longer period of education and training is now necessary as proper preparation for teaching in the elementary school. The recent marked development of the subject of education, too — a subject that in its modern form has been created almost entirely in the past twenty-five years — has aided materially in making this teachers college expansion possible. It now seems probable that the near future will see a new series of four-year professional colleges added to the existing public school system, erected

and maintained by the States for the special purpose of training elementary, junior high school, high school, and special-subject teachers for the schools of the State.

The work of the university. Though the college and the university are old institutions, with their roots running far back into the history of our Western civilization, and with a long and creditable record behind them, their great service as institutions of the State has only just begun. Dependent as democracy is upon mass education to obtain its leaders, the universities of the future will be called on for much in the way of training and service. It has by now become primarily the business of a State university to provide the leadership and furnish the standards for the enterprises of democracy. In times of agitation and change, and during the inauguration of new State undertakings, leadership and service are particularly the mission of the university. A recent writer has well termed the State university "the soul of the State."

The strength of the State university lies in its close relations to the State, and the faculty of a State university sustains a bearing to the State not sustained by professors in denominational and endowed institutions. These latter are free to serve the State in other ways. Of the professors in a State university the State may properly demand many forms of special service, both in the instruction of young men and young women to become agents and servants and administrators and scholars for the State, and also in the advancement of those forms of knowledge upon which the welfare of the State depends. In times of unrest and change, in particular, must the university remain true to its course, and men and women trained by it in history and politics, in law and government, in pure and applied science, in medicine and engineering, and in ethics and education must throw the force of their influence and intellect in directions

that will tend to insure the continued progress of the State and the Nation, that the cost of progress — in a democracy always large — may be reduced to a minimum.

The contribution of the university. Wholly aside from the training of leaders for the institutions of democracy, and the formulation of standards for democracy's undertakings, a university, State or non-State, gives large returns to a State and to the Nation in a purely economic way. Discoveries in pure science made in its laboratories have laid the foundations upon which many labor-saving devices have been worked out and many epoch-making applications have been made. In the fields of agriculture, veterinary science, engineering of all branches, economic geology, chemistry, and medicine — to mention only the larger fields — the discoveries made and their applications have been enormous, viewed either from a scientific or an economic standpoint. In the field of education, with which this book is particularly concerned, almost the entire subject has been created anew in the universities during the past twenty-five years. In government, public administration, business, social welfare, health, and the domain of morals, the returns have likewise been large.

The great work of the university of to-day is to reflect the spirit of the times without yielding to it, to serve material needs while at the same time standing above them, to establish standards for society on the basis of careful scientific study, and to prepare leaders for democracy that progress may be more intelligent and less costly. It was to found such institutions that our churchmen and statesmen and benefactors labored, and the American State University stands to-day as the crown of the systems of public instruction which our different American States have created. There is every probability that the college and the university — State, denominational, or endowed — and the

special higher and professional schools which have been created, will increase in importance as the years go by. The university development of the next half-century may quite possibly surpass anything we have so far witnessed, and the junior college and teachers college development is certain to be an outstanding factor in the educational world.

The scope of this chapter. This chapter, though sketching a special development in higher education, is in reality a chapter of the history of education in our country. In a course in the *History of Education in the United States* the student would study both the university and the normal-school development in much more detail. It has been presented briefly here to show the growth of the university and the teachers college as a part of the State's system of public instruction, and to show the place of higher education in the system of public instruction maintained by the State.

QUESTIONS FOR CLASS DISCUSSION

1. Explain the very slow development of the colleges before about 1800.
2. Show that, in their instruction, they were colleges and professional schools combined.
3. Show why it was but natural that higher education should have been left largely to denominational effort before about 1860.
4. Try to estimate the importance, for State university development, of the township grants for universities, made by Congress to each State on its admission to the Union.
5. Estimate the forces and influences that have caused the State universities to outstrip the denominational colleges since about 1860.
6. Show how the opening of collegiate instruction to women was a phase of the new democratic movement.
7. Show how college education has been a unifying influence of the first importance in our national life.
8. Show the relation between the great expansion of collegiate and university instruction, and the great social and industrial changes sketched in Chapter II.
9. Has it been easier to finance technical and professional education than the old cultural? Why?
10. With the growth of the Nation in population and wealth, and the great

increase in the number of students in the State universities, the better financed of the old denominational colleges are taking on new life and securing new support. Estimate the causes for this recent change, and its probable permanency.

11. Explain what was meant by saying that the State university has become "the soul of the State."
12. It is often said that a university brings ultimate money-returns to a people that far exceed its maintenance costs. Show how this might easily be true: (*a*) in material advances; (*b*) in the field of mind and morals.

EXERCISES AND PROBLEMS

1. Look up the early history of the State university in your State, if there is one, and trace the large periods of its development.
2. Take a catalogue or register of any large State university, and find the scope of the instruction offered.
3. Do the same for the agricultural and mechanical college of your State, and see in what ways it serves the people.
4. Study the instructional offerings of some junior college, show the correspondence with the freshman and sophomore work of a college, and see what special citizenship and service work it undertakes.
5. Taking the development of the normal school and teachers college as described in this chapter as a basis, determine the position of the teacher-training institutions in your State.

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CHAPTER XX

THE PROBLEM OF THE RURAL CHILD

The leadership of the cities. The reader who has followed the progress of this book up to this point probably has been struck, more than once, by how largely the conditions and practices described were city conditions and practices. Especially in dealing with such topics as the school board and its problems, professional school supervision, the classification of pupils, the organization of the curriculum, the reorganization of the educational system, the new additions to school instruction, the new social relations of the school, vocational and adult and extension education, and the new school plant, have the descriptions been those of good city practices and procedures.

This has been done for the simple reason that the best principles of action which have been evolved, and the best school work which has been done, have been in the cities. For the past three quarters of a century, in forms of organization, administration, supervision, classification, equipment, and in the extension of educational advantages, it has been the city everywhere that has been the pioneer and that has done the significant things. One could not describe what is typical of the better developments in American education without describing the excellent work done by our cities. It is they who have experimented with new ideas; it is they who have laid down lines of new development. This has not been an accidental result, but has come about because of very definite reasons, administrative in character, which have given to the cities the educational leadership of the Nation. The more important of these

reasons we shall summarize here by way of preface to the main discussion of this chapter.

In Chapter IV, in describing the administrative forms in use in the United States for the organization and administration of education, we sketched briefly (pages 69–70) the origin and use and limitations of the district system for school administration and control, and pointed out (page 71) that the city school district, despite its size and complex organization, is after all merely a single school district grown large and kept together. It is here that one finds the most distinctive feature of city school-district organization. Instead of allowing itself to become split up into hundreds of little school districts, as our counties have been (Figure 9, page 70), each with a separate board of trustees and with separate control and finance, the cities have had the good sense to keep their schools together and to administer them as a unit. One small central school board and one school administrative organization controls all the schools of the city school district, regardless of their number and differences in type, even though the city may contain a population as large as that of some whole States, and may expend for schools an even greater sum.

In organization, management, finance, and in educational purpose one finds everywhere to-day, in our cities, this unified educational control. A small school board, composed of representative citizens, oversees the administration of the entire school system, unifies control, selects the administrative officers necessary to carry out the proper executive work, hears reports, examines proposals, legislates, adopts budgets, builds buildings, and carries on the many other complex duties belonging to city school administration. The school board acts as does a board of directors for a large corporation, and the city superintendent of schools acts in an analogous capacity to that of the president of a corporation.

It is largely as a result of this unity in organization, administration, supervision, and finance, coupled with the careful selection of trained executive officers and then entrusting them with power, that the cities have been able to develop the types of school systems which they have. Large-scale organizations, centralized authority, professional leadership, specialization in production, and the elimination of unintelligent service and small-unit waste, together with fairly adequate finance, have been the secrets of the educational leadership which the cities have for so long maintained.

City and county school administration contrasted. When we pass from a study of the best principles of educational organization, as represented in our city school-district development, to the conditions existing in the counties of most of our States, the contrast is marked in all that relates to efficient educational organization and administration. In over half our States (see map, page 65) the form of educational organization and administration is based on the little New England school district as the main administrative unit. Instead of a county-unit system, analogous to a city school system in educational organization and effectiveness, and which by analogy with any other form of county business we might easily expect to be the natural form, we find a large number of unnecessarily small administrative units, each under the control of a little local school board, and but loosely bound together in a form of county educational organization. In many of the strong district-system States these district boards of trustees still possess so much power, and the county superintendent of schools has so little right of supervision over them, that county oversight exists largely in name. Instead of the county superintendent of schools being the educational leader of his county, he is reduced to the status of an office clerk.

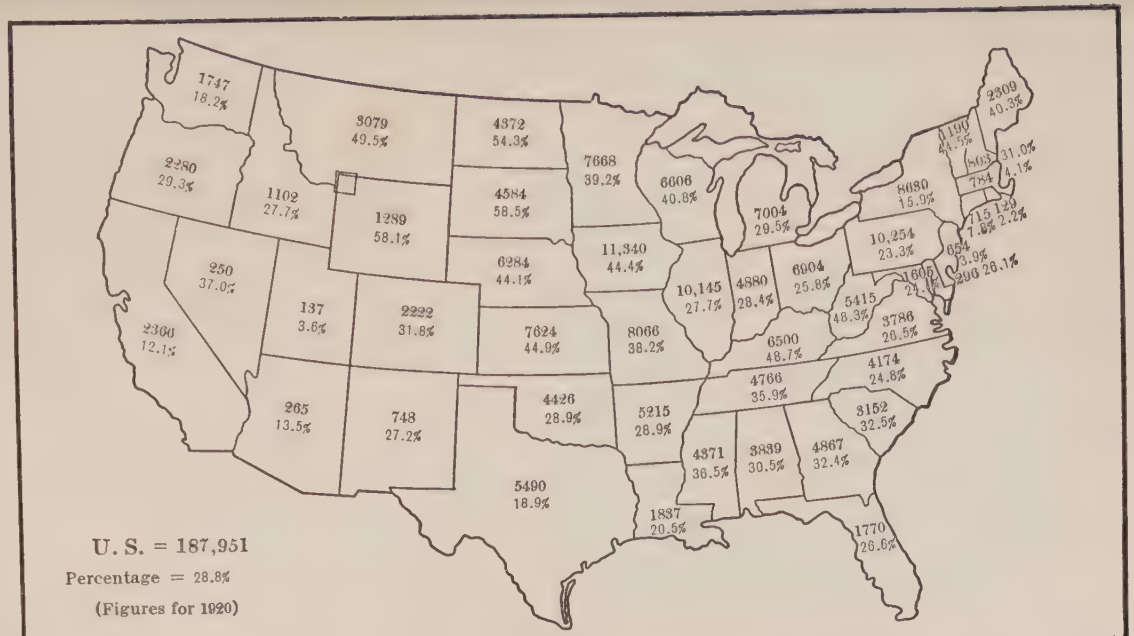

FIG. 42. NUMBER OF ONE-ROOM SCHOOLS, BY STATES

Also percentage of teachers in State teaching in these one-room schools. Figures for 1920.

That the old district system and the little district school still flourish, despite all recent progress in providing better forms, may be seen from the map given herewith. In 1920, out of 271,147 schoolhouses in the United States, 187,951, or 71.2 per cent of the number, were one-room schools. The 28.8 per cent of schoolhouses having more than one room housed, however, 71.2 per cent of the teachers employed. The large number of one-room schools in such strong district-system States as Illinois, Iowa, Minnesota, Missouri, New York, and Wisconsin will be noted. As will be pointed out in the following chapter, there is no need for so many small schools.

District trustee control. Instead, then, of the rural and village schools of our counties being organized as an educational unit, as are the schools of our cities, the schools outside of the cities — a few town, township, and county-unit States excepted — (see map, page 65) represent a decentralization in educational administration which inevitably results in poor schools and an inferior type of community service. Instead of one school board working at the problem and producing a unified educational organization and administration for the whole county, we find from thirty to two hundred different school boards working at the problem, each in its own way. The only unity of purpose is that imposed by the school laws of the State. In consequence we have a multitude of small and inefficient schools, usually poorly housed and limited in scope and outlook. The schools lack in number of pupils, in interest, and in enthusiasm. High-school advantages, outside the towns, are almost impossible under the district system, while coöperation between boards to employ special supervisors or to provide special instruction is practically unknown. The health conditions among rural children have been repeatedly shown to be distinctly worse than among city children.

Play needs are mostly not met, and the expression studies are largely unprovided. The teachers are often inexperienced and poorly trained, and supervision non-existent. Often the attitude of the district trustees themselves stands as the most serious obstacle to educational progress.

Financially the districts represent a taxing area entirely too small, and the cost for good rural schools is in conse-

FIG. 43. A TYPICAL RURAL SCHOOL OF THE BETTER CLASS

This is a good example of from one third to one half of the 187,951 one-room rural schools of the United States.

quence high. If any large dependence for support is made on district taxation — as is usually done in district-system States — the funds available for maintenance are so small that only a poor and inadequate school, taught by a cheap teacher and offering a type of education but little suited to rural needs, can be had for the district. The type of school building commonly erected and maintained by the district trustees is often but a miserable makeshift, being cheap in

construction, poor in lighting arrangements, having no sanitary conveniences, often with only a double privy in the yard, and with no place for carrying on the expression type of studies. The teaching supplies provided are often utterly inadequate, maps and globes and books and apparatus are lacking, and such few supplies as are furnished are far more costly, as a result of retail district purchasing, than they ought to be. The many educational and financial advantages which city and county-unit school systems enjoy, due to their ability to shift books and teaching equipment from building to building and from teacher to teacher, are entirely lost under the district system of organization.

Rural-school handicaps. The fact is that the district system of school organization has, in most places, entirely outlived its usefulness, and its retention is in no way necessary to the maintenance of schools in the country. As a system of administration its work is done, and good schools for rural people will be promoted in proportion as it is superseded by a larger and more effective administrative unit. The situation has become such at the present time that nothing short of a fundamental reorganization and redirection of rural and village education, along lines dictated by the best city administrative experience, can provide schools suited to the needs of children who live in small towns and on the farms.

The problem is further complicated by the conditions usually surrounding the office of county superintendent of schools. In twenty-eight of the forty States having a county educational officer he is elected by vote of the people of the county, and at the regular elections for county officers. By most people he is regarded as a county clerical and statistical and regulative official, and not at all as superintendent of instruction. How our cities could ever have developed the school systems they have, had they been dependent on such

a method for securing their professional leaders, it is difficult to imagine. The cities seek their superintendents of schools in the markets of the whole United States, and fix the salary necessary to secure the man they want; the counties trust to the political campaign, take the resident of the county who has been most successful in hunting the job, and pay him the meager salary fixed by the legislature. It is not surprising

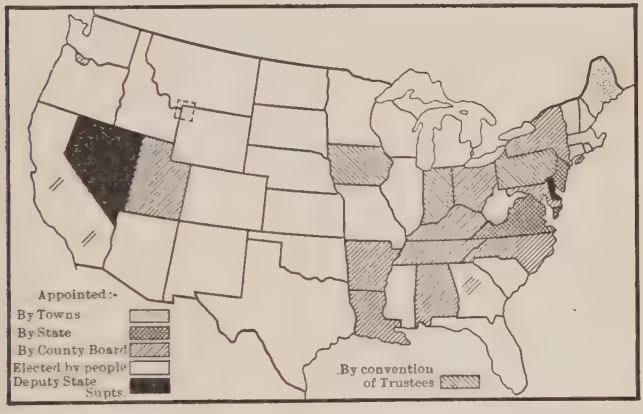

FIG. 44. HOW THE CHIEF COUNTY (OR TOWN) SCHOOL OFFICER IS SECURED IN OUR AMERICAN STATES

The six New England States use the town (township) system, there being no County School Officers in these States. There the Town Superintendents are appointed just as are high-school principals everywhere. Nevada and Delaware supervise from the State Office.

that the office of county superintendent, in the elective States, does not attract the best men in the teaching profession, and that but little progress in county educational organization and administration along sound lines has so far been made there. Good men can sell their services in a better market, and in the meantime the children in the rural and village schools pay a heavy price for the continued retention of an inefficient and outgrown system.

The new rural-life problem. The whole problem of rural and village education is further seriously complicated by a rural-life problem of large dimensions, which has developed in the United States almost wholly during the past half-century, and largely during the past twenty-five years. About half a century ago a profound social and industrial revolution began to modify the conditions of rural life, and within the past two decades this has culminated with such rapidity that it has involved not only most of the cherished institutions of rural society, but completely modified most of the conditions surrounding rural life as well. Some rural communities have experienced a greater change than have others, but no rural community has entirely escaped. Still more, the revolution has been so rapid, so extensive, and so far-reaching in its consequences that rural institutions have nowhere changed rapidly enough to keep pace with the new conditions.

The rural population is no longer the same, and its habits, tastes, and aspirations are different. Rural home life and rural society have been profoundly modified. The old rural social life has largely disappeared. Farm tenantry, and not infrequently an alien tenantry at that, is displacing the old native home-loving farmer in many of the richest agricultural sections of the United States. The progress of invention has greatly decreased the need for farm labor, and the recent tendency voluntarily to limit the family has materially lessened the number of children, with the result that the rural population has, in many sections, materially decreased. There is every reason to think that these same forces will continue to modify rural-life conditions for a long time to come. The old rural church, once a center for the community life, has been shaken to its foundations, and dead and dying rural churches are to-day found everywhere. The rural school, too, is no longer the same institution, no longer

has the same needs, and can no longer be conducted along the same lines with any degree of efficiency. The whole situation calls for reorganization and reconstruction along lines adapted to twentieth-century educational, social, and economic needs.

Taken together and as a whole, we call this collection of problems the rural-life problem. Of this rural-life problem the rural-school problem forms a most important part.

The rural school amid the change. In consequence of the far-reaching social and industrial changes of the past half century, the rural school finds itself to-day in a sorry plight. It is no longer the important community interest it used to be; it has largely ceased to minister to community needs; it no longer plays the vital part in neighborhood affairs it once played; its attendance has shrunk to a fraction of what it once was; increasing costs have left it in a serious financial condition; and educationally it has been left far behind by the progress the cities have made.

Under the stress of new conditions the old supervision by the district trustees has almost completely broken down, and little if anything has taken its place. Fifty years ago it was possible for the locally elected school trustees to direct the teacher and supervise the simple instruction of the day fairly well. Aside from the discipline and the material environment there was little to supervise. To-day, with the newer conceptions of educational work, the demand for better and newer types of instruction for rural children, and the new social, industrial, and educational problems facing the rural school, the need for intelligent leadership and direction is far beyond what any but the most intelligent community can supply. Inexpert local authority can no longer handle the situation satisfactorily, and a larger unit of organization than the school district is necessary if anything is to be accomplished of a worth while nature.

The rural-school problem, as we find it to-day, tied up as it is with the whole rural-life problem, has now become far too complex and difficult to be solved by local effort. The unit of organization is too small, even granted the presence of the local intelligence the problem calls for. The fundamental need to-day, with the coming of good roads, the automobile, the telephone, and larger business organization generally, is a rational and workable scheme of county-unit educational organization. The difficulties in the way are not insurmountable, as a few county-unit States have shown, though time, more money, and certain fundamental educational reorganizations will be necessary.

Recent efforts to improve the rural school. Within recent years the sad condition of rural education has attracted much attention on the part of thoughtful men all over the Nation, and some pressure has been applied with a view to remedying conditions. The tax limits in a number of States have been extended, so that the farmers could tax themselves a little more heavily for the maintenance of the school. Laws providing minimum salaries for teachers have been enacted, in the effort to attract better teachers to the school. The further subdivision of districts has been made a little more difficult, and some of the smaller schools have been ordered closed. An effort has been made to lengthen the term, and reserve funds to aid very poor districts have been created. Instruction in agriculture and the elements of home economics has been ordered by law, and normal schools have added these subjects to the training course for teachers. The powers of control of the county superintendent of schools have been enlarged a little at the expense of the district trustees, and an attempt has been made, in many States, to give these trustees some better conception of their duties by means of an annual trustees' institute.

The net result of two and a half decades of such effort is

that more money is spent now on rural education than in 1900; salaries are better; a somewhat better teacher is in the school; agriculture has been added to the instruction; the term is a little longer; some schools have been condemned, and others cleaned up; the trustee now probably gains a little better conception of his duties before his successor is elected; and here and there, at rather rare intervals in the district-system States, one hears of a consolidated rural school that is rendering a new type of rural educational service. The progress made, though, outside of the county-unit and a few township-unit States, has been discouragingly small for the effort in time and money and argument expended.

The real difficulty in the way. All such attempts to improve our rural schools by voluntary district action are closely limited by certain very fundamental defects in present rural-school organization and maintenance, and until these can be removed no very real improvement in rural school conditions is possible. Remedial measures may be applied, and possibly with some limited success, but fundamental changes cannot be made. The real difficulty in the way is the district system itself. It is almost incapable of voluntary and progressive action, and its use as a taxing as well as an administrative unit is an effective block in the way of betterment of conditions. Only under the stress of a teacher shortage or very burdensome taxation will the people give much attention to the idea of a larger district, and even then the enlarged district they will accept is too small to be really useful. But little progress in providing schools suited to the needs of rural children can be expected, for a generation to come, by voluntary unions in States where the district system still flourishes with anything of its old-time vigor. Not until the district system is abolished by general State law, and a larger unit of organization and administra-

tion substituted in its stead, will any substantial progress be made in providing rural and village children with schools which are the equal, for their needs, of those now enjoyed by city children.

What is called for is a reorganization of the educational resources of our counties as a whole, along good business and professional lines. Until this can be accomplished, intelligent farmers will continue to rent their farms to foreign-born tenants and move to the cities to secure the educational advantages for their children which the cities almost alone — in many States — offer to-day. The ultimate result of the process, unless checked by the provision of the right type of education, will be the stratification of society. The intelligent people will move to the cities and larger towns to obtain the necessary educational advantages for their children, while a less progressive and less intelligent — and largely a foreign-born — peasantry will come to occupy the farms of our land. Economically, this result might not be particularly harmful, but politically and educationally it would be a very unfortunate condition to have occur.

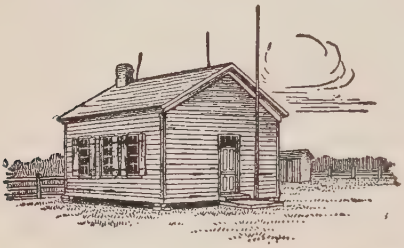

Fig. 45. One Reason why Intelligent Farmers Move to the Cities

The great rural social problem. The great rural-life problem facing us to-day is that of the maintenance of a satisfactory American civilization on the farms of our Nation. Large-tract commercial farming by individuals or by companies, on the one hand, and farm tenantry on the other, are not conducive to that end and are not best for the State. Farm ownership by the many rather than by the few, and

farm ownership rather than farm tenantry, are things to be desired. The typical American farmer of the past has been essentially a man of the intelligent middle-class, owning a medium-sized farm, maintaining a good standard of living, educating his children well, and he himself interested in the neighborhood and local affairs. How to preserve this standard, and how to develop such standards in the new farmers, is a very important social and educational question. As much as possible we want to retain on the farms, as farmers, a class which represents the best type of American manhood and womanhood, and to whom the farm is, before all else, a home. The upward evolution from laborer to tenant, and from tenant to owner, needs to be encouraged as much as possible. Conversely, the change from ownership to tenantry is unfortunate, and can be prevented in large part by the provision of better educational facilities and the enactment of wise laws.

For long we have striven to aid the farmer to increase his yields, to improve his breeds, and to eliminate disease from his plants and herds. This has been very valuable, as economic betterment lies at the basis of all social, moral, and educational betterment. Better farming and better business methods in marketing must precede better living. The great rural interests, however, are the essentially human interests, and the really fundamental rural-life problem is how to improve the conditions surrounding human life in the open country so as to make farm life less solitary, freer from sheer drudgery, fuller of opportunity, and more comfortable and attractive to the best farming people. To double the yield of corn and wheat and cotton and butter fat would be, indeed, a great achievement, but an even more important undertaking would be to double the comfort and happiness and attractiveness of farm life to the farmer, his wife, and his children. After all, the farmer and his family are more

important than his crops, and the conditions surrounding rural family life are more important than those surrounding the raising of pigs and corn. The magnitude and the national importance of the rural-life problem will be appreciated better if we remember that nearly one half of the people of the United States still live on farms and in the little villages, and nearly one half the children in our country are still educated in rural and village schools. In a number of our States the rural population still represents the great bulk of the total population.

Fundamental rural needs. To make agriculture remunerative and family life in the country attractive to intelligent and progressive people, both of which are necessary if we are to make any headway in improving rural life, certain fundamental needs should be met. In the first place, we need to do whatever we can to make life on the farm sufficiently satisfying to retain personality in rural communities. The financial success of the farmer, the rising land and crop values, and the desire for better education for his children have all alike tended to eliminate him from the country and to substitute the tenant-farmer in his place. The removal of the successful farmers to the city, as well as the desertion of the farm by the more energetic of the children, has tended to rob many rural regions of those men and women of forceful personality who have in the past given tone and character to rural communities. The result is to leave a low level of unprogressive mediocrity to do the farming and conduct the enterprises of rural society. That the schools, managed as they have been mainly by country people, are largely responsible for the condition in which country communities find themselves to-day, there can be little question. The away-from-the-farm influence of rural education in the past, and its lack of adaptability to rural needs, have been its marked characteristics. That the school must be the chief

agent in turning the current in other directions there also can be little question.

Another fundamental rural need, which the schools must help in satisfying, is that of giving to country people a larger life and outlook. The Smith-Lever work (page 349) is rendering much service here, and the schools should join hands with the agricultural colleges in the work. The fundamental social instincts of youth — recreation, play, friendships, social life — are instincts the rural and village school should satisfy. For the girls and women, too, life in the country is often unattractive because the work they have to do is so hard and difficult. Better homes, better kitchens, and a better-organized home life are needs which the school can train a new generation to provide.

Another need is a social center for the community life — a center that will assume leadership and help organize the possibilities that are present. The rural and village churches once satisfied this demand, but that day is largely past. The school, of all the institutions of rural society, if only it can organize itself for service, now seems most likely to be able to assume the needed leadership and become the new center for the community life. It and the branch library are the only institutions of rural society that are supported by all and equally open to all. The school represents no sect, no party, no organization, no lodge, and no single group or interest, but rather all such organizations united together for the advancement of the common welfare. It possesses a great advantage over all the other institutions in that its labors are directed to the education and improvement of the children of all the people, and this is a great unifying force.

Constructive rural service. The rural-life problem, as we stated earlier in this chapter, is one of large dimensions, and one calling for a reconstruction and a reorganization of rural

social institutions. The old institutions, as far as can be done, need to be reorganized, redirected, and quickened into new life. The one rural institution capable of rendering the needed service is the school, but to render such service the school must be made over. Until the rural school can be born again there is little hope for service from it.

Besides providing a new type of education for the children of rural and village people — an education that for them shall be as good as the cities now provide for their children — the opportunities of the rural school for community service exceed those which have come to the city school as a result of the new social relations it has recently assumed. The improvement of roads and roadsides; the abatement of eyesores and nuisances; the carrying through of a community plan for health and sanitary improvement; the organization of some form of hospital service; the formation of singing clubs and orchestras; the development of taste in music and art; the instituting of civic organizations; the opening up of recreational opportunities; the holding of contests and fêtes; inspection trips; the organization of clubs for boys and girls; coöperation with the farmers' institutes; the holding of lectures; branch library service; reading and extension courses; grain- and stock-judging exhibits; poultry shows; and the organization of a non-denominational church and Sunday-school — these are some of the ways in which a new type of rural school might assume leadership, quicken rural community life, and make of itself a community center of large importance and influence.

The development of a new and a better country and village life is largely a matter of education and guidance. New knowledge, new ideals, wise counsel and advice, new stimuli, new educational organization, and new guidance and direction are needed. The call for young men and women of personality, energy, capacity, convictions, and aspirations, and

who like the open country and will live there and work for agricultural and community advancement, is a call that is long and loud. Throughout our Nation the call is almost unanswered, except by the agricultural colleges. What is needed to supplement and give force to their work is the creation of a new type of rural community school, one that can and will meet the requirements of village and rural life. Once created, into this school will go thousands of the same kind of devoted servants who now serve the cities as teachers and principals in their schools. To attract that type of public servants the possibility for service must be there. This possibility the little district school does not provide. In the chapter following we shall show what type of educational reorganization is needed to help solve the rural-life problem which we have set forth briefly here.

The scope of this chapter. What has been presented in outline in this chapter is what is usually included in a course in *Rural Sociology*, such as is offered in most teachers' colleges and in many universities. Such a course aims to present the changes that have taken place in agricultural life, the new rural-life conditions, and the effect of these changes on the fundamental institutions of rural society — the church, home-life, local government, and the school. Sometimes the course is called *Rural Education*, or *Rural Life and Education*, in which case the course is directed more along the lines of rural and village school reorganization. A university course in *State School Administration* also includes the rural-school problem and county educational reorganization as a part of the course.

QUESTIONS FOR CLASS DISCUSSION

1. Do you see any principle of city school organization or administration that could not be applied to county organization and administration?
2. Show how the city educational organization results in the elimination of unintelligent service and small-unit waste.
3. Show how, in nearly all other forms of public service the county is the unit, and the resulting advantages of this.
4. Show the effect of the residence requirement and short-term elections on the salary and professional standing and equipment of the county superintendent of schools.
5. Why has farm tenantry tended to prevent increased support for rural schools?
6. Explain why the nature of the farmer's vocation makes it difficult to interest farmers in coöperative undertakings.
7. It is often said that "only a giving church is a growing church." Show how this principle would apply to the school.
8. Show why the provision of schools for rural children which will meet present-day needs is almost impossible under the district system.
9. Explain what you understand by "the social and industrial revolution which has involved most of the cherished institutions of rural society." Relate this revolution to the changes described in Chapter II.
10. Show the effect of the changes on: (*a*) the rural church, (*b*) the old rural social life, and (*c*) the small-type forms of government.
11. What would be your estimate as to the future effect, on farm home construction and remodeling, of introducing good sanitary appliances and good domestic-science equipment into the rural schools?
12. Explain why rural schools that forty years ago had twenty-five to forty children to-day have ten to fifteen, while the population of the United States has increased in the meantime.
13. How can the improvement of rural social life for the young be made to contribute to the improvement of adult rural society?
14. Why should the call for constructive rural service come to teachers with special clearness and force?
15. Show how an organized plan for visiting nurse work, to help mothers care for their children better, would improve rural-life conditions. Would it be a legitimate expenditure of public funds?

EXERCISES AND PROBLEMS

1. Find out, from the United States Census Reports, the extent of farm tenantry in your State, and its development, say since 1880, in your county.
2. Find out, from same source, population changes — increase, decrease,

change in character — in your (*a*) county and (*b*) State during the same period.

3. If you are in a district-system State, find out the number of trustees elected, the number of teachers employed, and number of schools of each size — one-room, two-room, etc. — in your county, and compare schools and teachers with enrollment.

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CHAPTER XXI

RURAL-SCHOOL REORGANIZATION

Attempts to solve the rural-school problem. As was stated in the preceding chapter, the unfortunate condition of rural life and education has, within the past two to three decades, attracted the attention of many statesmen, publicists, editors, and students of educational problems, and much thought has been given to the rural-life question. President Roosevelt became so interested that, in 1908, he appointed a Country Life Commission to study the problem and make recommendations. The Smith-Lever Act was largely an outcome of the recommendations of this Commission. The lack of the right kind of an educational system early became evident as one of the main factors in the rural-life problem, and much thought has been given to the question of how to secure the proper kind of educational advantages for rural and village children. As President Roosevelt well said, country boys and girls are not given "a square deal" in the matter of education.

Two general plans have been followed in attempting a solution of the problem. The first, and the earlier, was to try to explain to country and village people how wasteful and ineffective the existing district schools were, and how much better education they might provide for their children were they to abandon some of the many small schools, and haul the children to some central school where there would be more children and larger possibilities of providing a good school for them, and then to try to induce them to hold an election and vote to make the needed consolidations. This is what has been known as the voluntary transportation and

consolidation movement, and much effort has been expended in trying to secure results under it.

The other plan, and in general the later one to be employed, has been to force the abandonment of the district system by law, to replace it with some form of the township-, community-, or county-unit organization, and then to put this larger unit at work at the problem of providing schools suited to the needs of country children. We shall describe each of these methods, and state the general results attained under each.

Beginnings of the consolidation movement. The first law permitting the expenditure of public money to transport children to school was enacted by Massachusetts, in 1869. The original intent of the law was to permit the carrying of the older children to a central town high school, but, after about 1875–80, towns there began to take advantage of the law to close up small outlying schools and to transport the children to a central town school. After 1882, when the district system was abolished in Massachusetts and the town system restored in its place, the transportation movement increased so rapidly in importance that, in 1888, the State began for the first time to collect statistics as to the amounts of money spent for the purpose. This amounted to twenty-six thousand dollars in 1888; to-day it is approximately nine hundred thousand dollars.

By 1890 the consolidation movement was under way in all the New England States; New Jersey and Nebraska had made consolidation possible; and Indiana had begun consolidation without waiting for any legal permission. Ohio, in 1894, was the first State west of the Allegheny Mountains to enact a law permitting the expenditure of public money for the transportation of pupils, and between that date and 1910 the movement became national in scope. In 1895 the National Education Association appointed a committee to

investigate the whole matter of rural education. This committee reported, in 1897, and recommended the abolition of the district unit and the substitution of the township or county, and the enactment of laws providing for the consolidation of schools and the transportation of pupils.

Slow adoption of the idea. After about 1900, due largely to the changing rural-life conditions which had by that time begun to manifest themselves in all agricultural regions, the consolidation idea may be said to have taken root, and the rural-school problem now became a topic of general discussion. Between 1897 and 1905, some twenty States enacted permissive laws under which it became possible to vote consolidations and to transport children to a central school. By 1910 only ten States had as yet enacted no such legislation. From permission to general adoption, however, proved to be a long step.

From about 1900 up to at least the outbreak of the World War, a large amount of energy was expended in an effort to induce rural people to consolidate their schools. Hundreds of reports favoring the idea were prepared, committees of citizens visited consolidated schools in other States and reported, many illustrated magazine articles were written setting forth the advantages of the plan, and many State superintendents of schools and college professors lectured on the question and showed, by lantern slides, the type of school that might be provided for rural and village children.

The outstanding result in the strong district-system States, however, was that but little was accomplished. Only here and there among the more intelligent of the rural communities could the rural people be induced to give up their district system, even when shown beyond doubt that the results would be beneficial to their children. Despite arguments, facts, and illustrations from successful consolidations, they clung to their little schools as though liberty might pass

from the land were they abandoned. Proposals for consolidation awakened violent hostility. Proponents of the idea were termed impractical visionaries, superintendent after superintendent gave up in disgust, and many county superintendents lost their office because of the enemies they had made in the districts through advocating consolidation. Until the general coming of the automobile, many farmers opposed the plan because they feared it was a hard-roads movement in disguise which city people were trying to "put over" on them.

Even as late as 1923, the Joint Committee in charge of the Rural School Survey of New York State reported that:

> the rural people of New York State are in a great many cases — one might say in a majority of cases — opposed to consolidation of schools, and even to the redefining of district lines. To be sure, the farmer knows that the little school house cannot carry his child very far on the road to knowledge; it certainly cannot give the child a high-school education. He knows that a little school with small attendance is very expensive per pupil. He knows that the equipment is meagre, and the teacher usually less qualified for work than teachers in schools of the neighboring towns. But the farmer will resist to the bitter end any movement on the part of the superintendent or the State to set up a well-equipped, graded school through compulsory consolidation. In most communities the people are not in an attitude of mind to consider the question as applied to their community on its merits.

Small results for effort expended. Here and there, in the district-system States, some county superintendent of schools of large insight and energy has succeeded, by the exercise of much patience and perseverance, in creating one or two consolidated schools that set a new standard for rural education, but the marked interest these accomplishments awaken only serve to emphasize the contrast between these few successes and the wholly inadequate educational facilities which surround them on every hand.

It required, for example, seventeen years of talking to secure the first seventeen consolidated schools in Iowa. Illinois first authorized consolidation in 1905, and fifteen

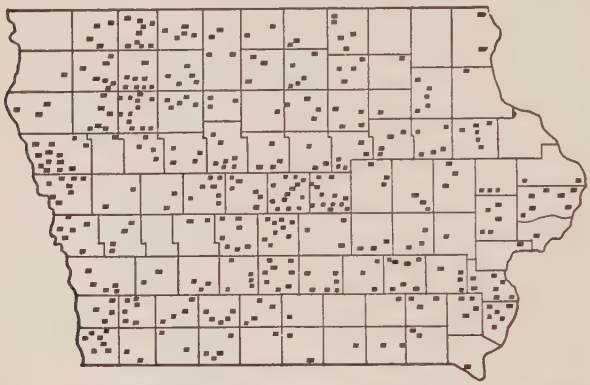

FIG. 46. MAP OF IOWA, SHOWING THE LOCATION OF THE 388 CONSOLIDATED SCHOOLS IN MAY, 1924

Many of these are township consolidations, and have both grade and high school. It took Iowa 17 years to secure the first 17 consolidated schools, but in the six years from 1914 to 1920 over 300 were organized. As a result 50,000 children have passed from one-room rural to consolidated schools, and the State is now about one sixth consolidated, in area. About 1500 one-room schools have been closed, but 11,340 such schools still remained in 1920.

years afterward had only 78 consolidated schools in the State. Missouri, in 15 years, secured only 83 consolidated schools; Kansas, a State where much effort has been expended, secured only 20 schools the first 9 years, and 109 in 22 years. These numbers are small compared with the number of one-room schools still existing (see map, page 375) in these States. Colorado, which now has a number of good consolidated schools, secured only 68 the first 9 years, despite excellent work done by the State Agricultural College in trying to stimulate their development. When one visits and examines these consolidated schools, what has been accomplished seems wonderful only because so few such

schools have been created in the district-system States, whereas what is still so uncommon should be almost universal.

Defects of the voluntary consolidation plan. The earlier efforts, outside a few States that we shall mention when describing the second main plan to be employed, all depended on argument and voluntary action. Under this plan but little was accomplished compared with the effort expended, and in time county superintendents largely gave up the attempt. In addition to being wasteful of time and effort, it was also too dangerous to their political futures. Even where voluntary consolidations have been effected as a result of such urging, they have usually been on a scale much too small, and later on a new task will be the further consolidation of these consolidated schools. The real trouble lies in that all such attempts to improve the rural school depend on the voluntary coöperation of the district trustees and the rural people themselves, and this, as every one who has worked with rural people knows, is a very difficult thing to secure.

Even when such coöperation is obtainable, it usually is obtainable in too small units. Districts that ought to come into a proposed consolidation have to be left out to carry the election; future development cannot be anticipated; not infrequently districts are omitted and left stranded for other than educational reasons; provisions for high-school advantages usually are not included; the community-center idea ofttimes is not thought of; and purely local and non-educational interests too frequently determine the conditions of union and the location of the school.

The voluntary method, too, is a very slow one. The first consolidation in a county is usually very hard to form, and much patient effort is required to get the matter to a vote. The first vote often gives a negative majority, and finally to

carry the proposal it is necessary to omit some district or districts which ought to have been included. After one good union has been established and is working successfully it is easier to form the second, and still easier the third. The time comes, though, when the limit of such voluntary action is reached, while many small and inefficient schools still remain.

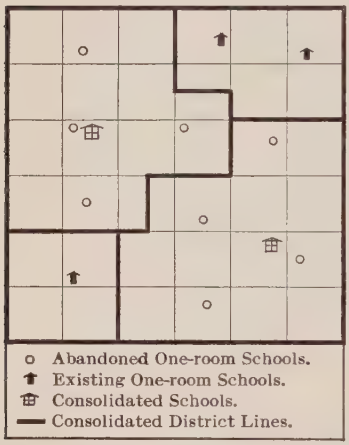

FIG. 47. A COMMON RESULT OF VOLUNTARY CONSOLIDATION

Consolidated district too small, and some schools left out that ought to have been in. The area of the consolidated districts is 13 and 13½ square miles, whereas the whole township (36 square miles) is not too large an area for consolidation.

The voluntary union plan possesses many of the short-sighted defects of the district system of school administration. The necessity of first getting the people to ask for an election by means of a petition, and the carrying of the election in each district, is one reason why voluntary consolidation in the district-system States has been so slow. It requires too much effort for such small results. While the progress of consolidation in these States has been a little more rapid since the coming of the much higher costs for everything following the World War, the reasons for the increased rate have been economic at bottom, and the unions so formed are frequently so small that they have had a palliative rather than a remedial effect.

The motorized consolidated school. When consolidation began, and during much of the progress of the movement, it worked under the rather serious limitations of dirt roads and horse-drawn transportation wagons. These were draw-

backs to the development of good schools for country children because, with the recent marked decrease in the rural population, not enough children could be brought together to provide the type of school needed. The distance children could be hauled in fifty minutes to an hour was seldom over five or six miles, and more often three or four. As the roads west of the Alleghenies — except in the far West — generally run North and South and East and West, an angling distance of four miles by road meant less than three miles air-line from the schoolhouse, and an angling distance of six miles by road meant only four and a half miles by air-line. It was often difficult to pick up a hundred children of elementary school age in this limited area, unless a village formed the center, and the consolidated schools formed were consequently too small. A township ($6 \times 6 = 36$ square miles) was about the maximum area that could be consolidated, and often this was found to be too large.

The coming of the automobile, the grading and graveling of the roads, and in particular the building of paved roads, have completely changed the whole face of the problem. Children can now be hauled twelve to fifteen miles in the same time, and far more comfortably, than they used to be carried four to six miles by horses over the old-type roads. A maximum haul of twelve miles, counting all travel by rectangular roads, would mean that an area twelve by twelve miles, or four townships, could now be consolidated, while a similar haul of fifteen miles would mean a consolidating area of six and a quarter townships. Assuming only one hundred elementary school children to a township, we get schools of from four hundred to six hundred and fifty children, and, adding the high-school pupils who could now be brought in, of from five hundred to eight hundred children. In this type of large consolidated and motorized school as good a program of school work, from kindergarten through high

school, can be offered as is done in the cities. Where a village is the consolidation center, a much smaller area is needed to secure sufficient children to provide the best of schooling for the rural and village children.

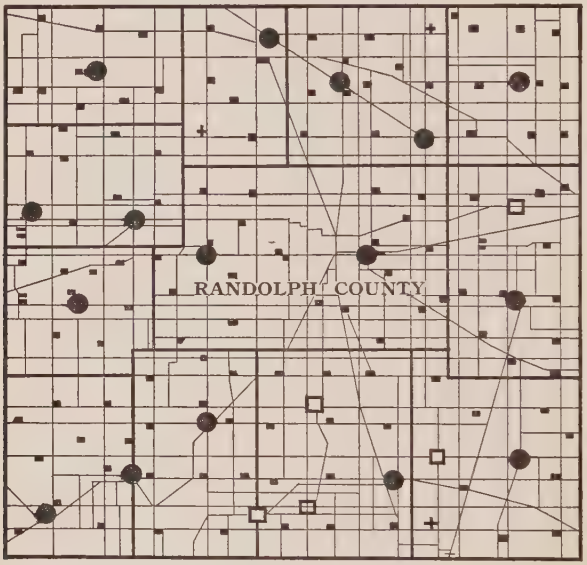

FIG. 48. RANDOLPH COUNTY, INDIANA, SHOWING PROGRESS OF CONSOLIDATION BY 1921

The 16 large black circles indicate the position of consolidated grade and high schools; the 5 hollow squares indicate consolidated grade schools only; the three crosses indicate surviving one-room schools; and the 128 small black dots indicate abandoned schools. The heavy black lines indicate township lines. The county contains 447 square miles, and is approximately 21 miles square.

So completely have the coming of good roads and the automobile bus changed the character of the consolidation problem that one of the new problems, in States where many small consolidated schools exist — as in Indiana — will in time be that of consolidating the consolidated schools developed during the past two decades or more. Figure 48,

showing the consolidation in one Indiana county, will make this clear. Here we find 21 consolidated schools in an area of 447 square miles, or an average of 23 square miles per school. This is an area of 4.6×5 miles, and a wagon haul of 5 miles as a maximum. By enlarging the area per school to 90 square miles (9×10 miles, with a maximum automobile-bus haul of 10 miles), 5 consolidated schools could be made to replace the present 21. Counting the added school population of a few village centers, probably 8 or 9 consolidated schools would answer the needs of this county much better than do the present 21. With larger school units, a school program better adapted to individual and community requirements may be developed.

A typical consolidated school of the better class. To show what the new and better consolidated schools are like, and the type of education they offer, a description of one of the better class will be given. It may be in a village, or it may be out in the open country. Some of the best of these schools are located on ten to twenty acre tracts, with no farm houses within a quarter to a half mile of the building. The school building is often as good as the best of city school buildings. There will be grade rooms, kindergarten room, high school recitation rooms, laboratories, library, cafeteria, auditorium, gymnasium, and shops. Figure 32, page 321, or Figure 34, page 324, might be floor plans of a modern consolidated school building. Outside will be a school-bus garage, teachers' residence, principal's home, janitor's cottage, play-fields, and agricultural experimental grounds. The school enrollment will be from 350 to 600, almost all transported daily if in the open country, and probably one half to two thirds if in a village. There will be at least junior high-school advantages, and probably a full four-year high school as a part of the school. The enrollment will be twice as many as ever went to all the old district schools combined,

and the daily attendance twenty-five to fifty per cent better. Ten times as many children will be in the high-school years as ever before went away from home to high school. A nine-months school year will be provided instead of the former six months in the district schools.

All the drill and content subjects will be found in the courses of study, and most of the expression subjects as well. Special emphasis will be laid on agricultural work, farm projects, farm-shop courses, auto-mechanics, home-making studies, music, orchestra, and organized games. Many extra-curricular activities will be directed by the teacher. The physical development and health of the pupils will receive special attention. The auditorium will be much used by both pupils and parents, and many social affairs will take place in the school buildings. In some places a non-denominational community church and Sunday school have also been organized, meeting in the schoolhouse on Sundays. For this, for lectures, and for social affairs, the school-buses are used to bring in the parents, as well as the children. The school, in addition to offering educational opportunities for rural children on a par with those that city children generally enjoy, is a real community center for the people, and usually stands as the most conspicuous landmark for miles around. By reason of its large community service it becomes a matter of community pride instead of community neglect. It usually costs somewhat more to maintain than did the district schools, but it is worth more.

Means employed for stimulating consolidation. Generally speaking, the policy of most of our States has been to await the slow process of education, and to use some form of subsidy to stimulate consolidation rather than to force it. They have usually preferred to let bad conditions prevail rather than compel the substitution of better ones. This is a typically American way of doing things. Many pictures

and descriptions of schools have been printed and distributed, and many lantern-slide lectures have been given. The Smith-Lever extension workers have helped, and recently the automobile-school-bus salesmen have rendered some service.

Other devices that have been useful have been State subsidies calculated to stimulate consolidation. These have taken a number of forms, but chiefly those of State money-grants to approved graded schools and to consolidated districts, usually on the basis of size of school or number of districts done away with by the consolidation. These means have been used to encourage voluntary consolidation. They have of course been useful, but when one compares the small number of graded and consolidated schools with the large number of one-room schools still existing in the States that have made most use of these means, one feels that they have not been so very effective after all.

Substitution of a larger administrative unit. The other and the most important means for securing the needed consolidations has been the abolition of the district system by law and the substitution of a larger unit for school organization in its place. In the New England States and in New Jersey, the town has everywhere been substituted for the district, and the location and abandonment of all schools has been placed with the school authorities of the town. In Indiana, parts of Michigan, and the two Dakotas, the township has been made the unit. In a number of the Southern States and in Utah the county has been made the required unit, and a few other western States (see map, page 65) have made the county permissive as the unit for organization and administration.

Twenty-five years ago the use of the township was widely advocated, but it is not a natural governmental unit except in the upper Mississippi Valley States, and this militates

against its use. Still more, it is a small unit — thirty-six square miles — and has since proven to be too limited for present-day educational needs. Still further, its rectangular form often bears no relation to trading centers, lines of travel, or natural community boundaries. With these difficulties in mind an effort has been made, in a few States, to make the so-called rural community — whatever its size or shape or location — the unit for school organization and control. In a way the community has formed the natural unit for most consolidations. In the two Dakotas and the State of Washington the community has been much used as an area to supply children to the consolidated schools. The community high schools of Illinois and California, and the old union-free-school districts of New York, have been formed similarly with a more or less natural community as the supporting area for the school.

The community though, whatever its advantages, is in turn too small an area for independent administrative organization, without supervision over it other than that of the central State official. Often it is too small for even a high-school district. We finally come, in organization and administration, to a point where we need some administrative units over the township and community units, one that is larger than they are and smaller than the State. For this the county offers a ready-made and a familiar unit, and it has been used most effectively in this connection by a number of our States as the unit for the organization and administration and supervision of the rural and village schools.

County-unit school administration. The map on page 65 shows the States which have adopted the county as the unit for school organization and administration. Where the county is made the school unit the many little school districts are abolished, as corporate and legal bodies, and the many boards of school trustees cease to exist. Instead, the

people elect one county board of education for the whole county, cities under separate school boards excepted. This board now takes charge of all the schools of the county, outside the cities, and manages them as a unit. The politi-

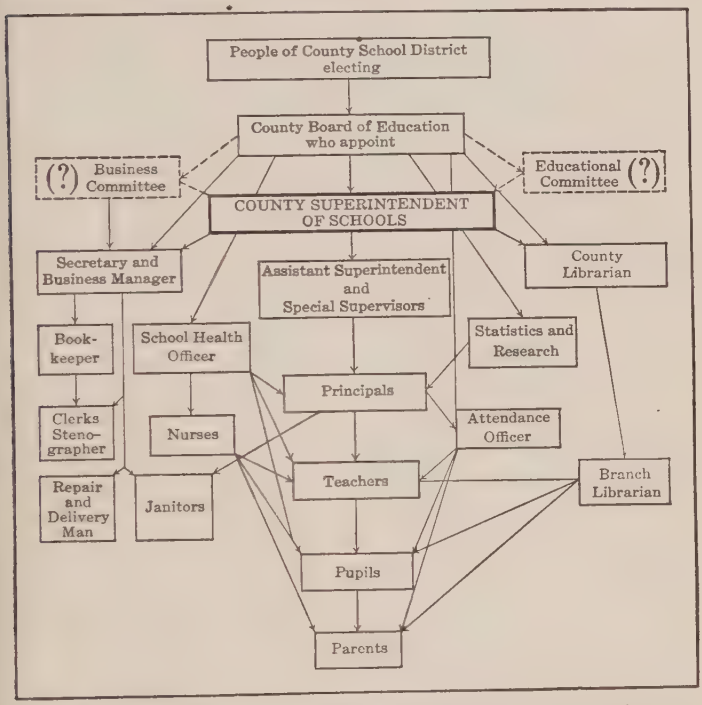

FIG. 49. PLAN OF EDUCATIONAL ORGANIZATION FOR A COUNTY SCHOOL SYSTEM, SHOWING PROPER RELATIONSHIPS

Compare this with Fig. 12, page 117, showing organization for a city.

cally elected and local school superintendent also disappears. In States having small counties two counties may be joined for the purpose of school organization, and in States having large counties a county may be divided into two units,

though the latter is seldom desirable. City school districts, maintaining a full twelve-year school system, employing a city superintendent of schools, and meeting certain educational standards, may be exempted from the county-unit organization.

The county board of education now selects and appoints the county superintendent of schools, being as free to secure him from anywhere and to fix his salary as are city school boards everywhere in the selection of their city superintendents. The county board also appoints a secretary, a county librarian, and such other county school officers as may be needed, acting in such appointments on the recommendation of the county superintendent of schools. Also upon his recommendation the board appoints supervisors, principals, teachers, janitors, and other employees, and fixes their compensations and duties. The county board also provides a common school term for all schools, employs special teachers as needed, levies a common school tax for support, and makes rules and regulations for the control of all the schools of the county. The form for county-unit educational organization is well shown in Figure 49, and a comparison of this with the form for small city organization (Figure 12, page 117) will make clear the close analogy between city and county-unit educational organization. The lessons and the experiences of the one become the guide and the inspiration of the other.

From the old to the new. When the county-unit plan is first inaugurated, all existing schools remain as they are. The one county board of education merely replaces the dozens or perhaps hundred or more little school district boards as the controlling body. One uniform county school tax replaces the many varying district taxes, and one common county standard of term and salaries and advantages the many district standards. All the little schools may, for

a time, continue to exist, until the county board of education can study the problem presented. The great advantage of the county unit, as in the case of the smaller New England town or the Indiana township unit as well, lies in that the county board of education is free to act, once it sees its way clear, without the necessity of waiting for voluntary district action. It acts just as a city board of education would act.

Figure 50 illustrates fairly well the process and the result. Assuming that at the time the county-unit was ordered sub-

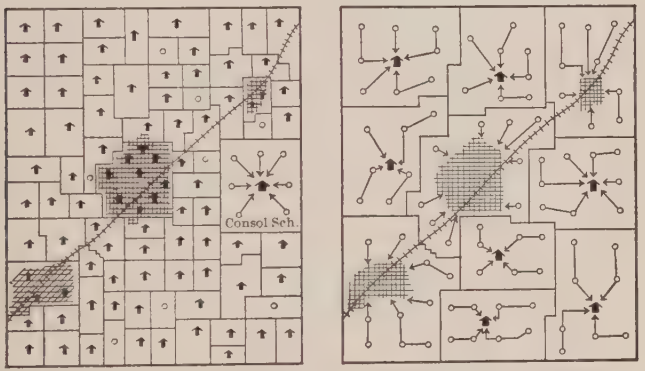

FIG. 50. RURAL EDUCATIONAL REORGANIZATION
Eighty-eight school districts consolidated into ten.

stituted for the district system, by the Legislature, one consolidated school district had been formed, as is shown by the left-hand half of the figure. This may represent about the maximum possible accomplishment in that county under the voluntary system. The county board, after a careful study of roads, community lines, educational needs, children, and other factors for the county as a whole, finally decides that nine additional consolidated schools, as shown by the right-hand half of the figure, would best meet the educational

needs of the county. This is quite analogous to the survey of school-building needs for a city, as described in Chapter XVII and illustrated by Figure 38, page 331.

Having so decided, the county board is now free to begin their building program and the gradual abandonment of the eighty-one one-room schools. The final result — after say ten years — is that shown by the right-hand half of the drawing. A partial or a complete high school may be connected with each consolidated school, and all the children of the county will in time be provided with high school as well as elementary school advantages. The great advantage of such a county-unit plan is that the educational authorities are free to take the initiative in the matter of improving the rural and village school conditions, and do not have to await the long, slow process of voluntary community action. Progress can be made this way in a decade which could not otherwise be made in a generation, and in addition the final result is more consistent.

Advantages of the county unit. The county-unit plan thus provides a definite method for the economical and intelligent reorganization of rural and village education. It also makes the county the unit for school taxation, which is a very great advantage for all business matters relating to the schools. This results in an equalization of school tax-rates and educational advantages, as well as in a more economical handling of the school business of the county. In addition to providing for the organization of the educational resources and possibilities of a whole county under one responsible board and executive officer, it takes the office of county superintendent of schools out of politics and makes of it a professional office. A man or woman who now desires to become a county superintendent of schools will be warranted in going to a teachers college or a university and making careful preparation for the office, instead of entering the work *via* the county political route.

The time and energy a county-unit form of organization would save, in comparison with operating under the district or even the township form of organization, would be enormous. Instead of the county superintendent of schools having to spend a large proportion of his time in trying to get results by working with and through the district trustees, being respectful of their authority and trying to educate them as to their duties, correcting their reports and accounts, compiling items as to district conditions, endeavoring to get reasonably satisfactory teachers and living conditions for them in the districts, and striving not to make too many enemies in the districts by being too progressive — the superintendent would now be able to use his time and energy for working with the teachers and providing good educational advantages for the children in the towns and rural sections of his county. Instead of a series of little district elementary schools, small in size and poor in quality, there would in time come to be a small number of good consolidated schools, with high-school advantages open to practically all children of a county, and with many of the special features of instruction which make our better city schools so attractive to city children.

The institution of a county-unit form of educational organization and administration would mean the gradual reorganization and re-direction of rural and village education, and the provision of schools giving to rural and village children a square deal in the matter of educational advantages. It would ultimately do more to equalize these advantages as between city and rural children, as well as to help solve the rural-life problem, than would any other thing that could be done. In its essential features it would be nothing but the application of the best experience of our cities to the problem of educating the children of our rural and village communities.

The scope of this chapter. This chapter has taken up the rural-life and the rural-school problems presented in the preceding chapter, and given a solution for them in the reorganization of rural education in a series of consolidated schools. To do this a new form of school organization and administration and supervision is a necessity, and this form has been described and its advantages set forth.

The plans used to secure the consolidation of schools often form a part of a normal school or a teachers college course on *Rural Education*, while the county-unit plan of educational organization, as well as rural school reorganization, are parts of a university course on *State School Administration*.

QUESTIONS FOR CLASS DISCUSSION

1. What do you understand to be meant by the re-organization and re-direction of rural education?
2. Apply the present district system of school administration to a city of a hundred teachers, with little schools and separate boards of trustees and finance for each, and try to imagine the result.
3. Try to imagine the result also, if in addition the city superintendent of schools were elected by the people of the city, from among local residents, at the annual city election, for two-year terms, and paid a salary fixed by the legislature.
4. Explain why, as you see it, it has been so difficult to start the consolidation plan in the States mentioned on page 396.
5. On what political and social theory has the idea of voluntary action in consolidation been based?
6. Show that the subsidy method of stimulating consolidations will never reach the places most in need of it, and why.
7. Show that there must come a time, in inaugurating any desirable plan, when voluntary action must give way to required action.
8. Show that the course of study followed in the one-room rural school must be largely a book-type course of study. Is this the proper type for rural children?
9. Do you see any reason why the type of consolidated school described on page 401 should not provide just as good and as rich an education for rural and village children as do the best of city schools for city children?
10. Show that the county-unit in school administration is an administrative device to secure better educational results, and that it in no way

precludes the possibility of retaining all the one-room schools a county has.

11. In one of our district-system States the Legislature recently, after careful consideration, enacted a law instituting the county unit in the State, and abolishing the district unit. The people, incensed at this action, invoked the referendum and repealed the law, despite a vigorous campaign to explain its merits. How do you account for such results?
12. A recent writer contended that the small-unit consolidations of the earlier years have been a good thing, and that ultimately we shall have far better large-unit school buildings and schools for rural children than would otherwise have been the case. What do you think of this argument?

EXERCISES AND PROBLEMS

1. Calculate, for Iowa, on the basis of figures given under the map (Figure 46, page 396), the number of consolidated schools ultimately needed for the whole State. The State has 99 counties, an area of 55,475 square miles, and as yet but few wet-weather roads. What do you think of the number of schools being provided?
2. Which is the more expensive, a district school for 9 pupils costing $1250 for annual maintenance, or a consolidated school for 200 pupils costing $25,000?
3. Assume an area of four townships consolidated, 46 one-room schools abandoned, and a new consolidated school erected on a twelve-acre plot at the edge of a centrally located village of 200 people. The one-room schools averaged an enrollment of 10, and an average daily attendance of 8; and the town two-room school an enrollment of 55, and an average daily attendance of 47. There are no high-school advantages in the townships, but assume that, if provided at the central school, a 25 per cent increase in enrollment would go to the high school. Roads all good graveled roads.

   Make a map of the four-township consolidated district, showing central school, abandoned schools, and bus routes required, assuming a maximum of 30 children to a bus. Also outline the kind of a school that could now be provided in terms of pupils, teachers, years of instruction, and kind of instruction.

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CHAPTER XXII

FINANCING PUBLIC EDUCATION

The beginnings of school support. When schools first began in this country, many different means for school support were tried. Town taxes were used early in New England, as were grants of land the income from which was to be used to support a school. In the Colonies where the church school was established the churches provided the necessary support, usually out of the proceeds of tuition fees and collections. Up to the beginning of our national history these were the chief sources of school support.

After the establishment of our independence as a Nation, there was a period of from thirty to fifty years during which the public school idea was slowly being established. During this period a large number of different expedients were tried in an effort to finance the new schools which the people began to demand. The holding of lotteries was a favorite early plan, as were also the levying of tavern licenses, marriage licenses, dog taxes, banking taxes, and fines for violations of laws. These all represent forms of indirect taxation, and were very useful in accustoming the people to the idea of school support. Some large land endowments, such as the setting aside of the western counties by New York State, and the Western Reserve (in Ohio) by Connecticut, were also made by the older States. Congress, too, early began to give lands, in the form of the 16th section in every township in the new States (began with Ohio, in 1802), the income from which was to be used to support schools in the townships. These various grants formed the beginnings of what to-day are known as the permanent school endowment funds of our States.

In time it became evident, however, that no large dependence for support was to be placed on the small income from such funds and lands, and that the only real dependence for the support of a system of public instruction lay in the direct taxation of the property of the people. By 1825 this had become clear to many, and the battle for school taxation was on. "The wealth of the State must educate the children of the State" now became a rallying cry, and by 1850 the principle that every man's property may be taxed to educate every man's child had been established in every Northern State. As was stated in Chapter I the struggle was a bitter one, and the lines along which the question was fought out varied somewhat in the different States. In a general way, though, the steps in the evolution of general taxation for education were somewhat as follows:

1. Permission to communities to organize a school district, and to levy a local tax for schools on the property of those consenting.
2. Local taxation extended to all property, regardless of consent.
3. The organization of school districts made easy, and mandatory on proper petition.
4. Small State aid to all organized school districts to help support a school.
5. Compulsory local taxation to supplement the State aid.
6. Permissive, and later compulsory, township or county taxation to supplement the district taxation.
7. Larger and larger State support, and assumption of public education as a State function.
8. Extension of the taxation idea to include high schools as well as elementary schools.

General taxation a pooling of effort. The idea underlying all general taxation is that of the pooling of effort for the provision and maintenance of what has come to be recognized as for the common good of all. The extent to which this pooling of effort for education takes place is in large part determined by the social vision of a people, and by how

thoroughly they share the conviction, as stated long ago by Horace Mann, that the provision of a good general system of public instruction forms the strongest offensive and defensive instrument of a modern democratic State.

Permissive local district taxation, and later compulsory district taxation for schools; marked the first steps in the pooling of effort to provide education for the children of a people. Under this form of school taxation the people of each little school district agreed to pay for the maintenance of a public school in proportion to the amount of property each possessed, and to share in the benefit in proportion to the number of children each had to send to school. That some might pay who did not share, and some might share who did not pay, only served to bring out clearly the coöperative nature of the community undertaking.

The first step in advance from district taxation came when the people of a whole town (in the New England sense of the term), or of a whole township, conceived of education as something in which all were interested, and agreed to pool the costs and share the benefits over the entire town or township. This represented a distinctly broader conception as to the need for and the importance of public education than did the district plan of support, because it pooled costs over a larger area, and equalized the inequalities in ability to maintain a school as between the different districts. This type of the pooling of effort is found everywhere to-day in the New England towns, and in the township-unit States is well exemplified by Indiana, where township taxation has been the unit since the abolition of the district system, in 1851. The community consolidated school and the community high school also represent a similar pooling of effort on a larger scale than the district that a larger or a better school may be maintained.

The next step in advance came when the people of a whole

county agreed to pool the cost for schools, in whole or in part, over the entire county and to establish county taxation for education. The pooling now took place on a much larger sale, and naturally tended to smooth out more of the inequalities in ability to support. It is this equalization of

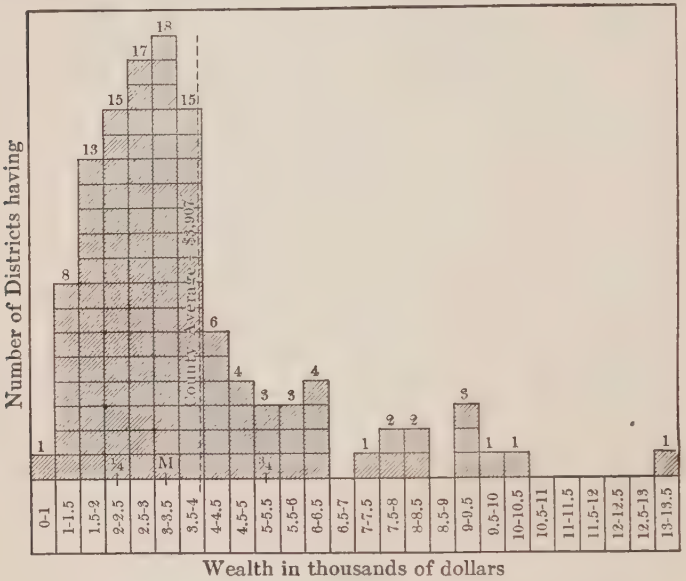

FIG. 51. DISTRICT INEQUALITIES IN ONE NEBRASKA COUNTY

This chart shows the distribution of 118 school districts in one county in central Nebraska, in thousands of dollars back of each child in average daily attendance in the schools. The extremes were $997.92 at one end, and $13,163.38 at the other. The position of the median, and the upper and lower quarters of the distribution, are shown on the drawing, as well as of the county average of $3906.80. (After Olsen.)

the burden of support and of opportunity which forms one of the important advantages of the county-unit system of school administration. The tax rates of the richer districts are naturally increased over what they would be under district taxation, but the tax rates of the poorer districts are

decreased, and a higher general level of education can now be provided. Figure 51 shows existing conditions in one central Nebraska county of 118 school districts, and the inequalities in ability to maintain a school. What some districts can do with ease, other districts cannot do at all. If costs were pooled over the whole county there would be sufficient property behind every child in average daily attendance to maintain a much better type of education throughout the whole county. Still more, a county-unit of

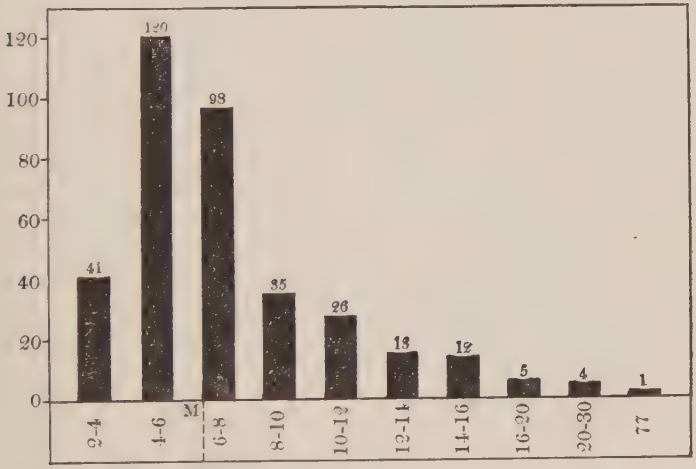

FIG. 52. INEQUALITIES IN WEALTH IN MASSACHUSETTS CITIES AND TOWNS

Showing, for the 355 Massachusetts cities and towns, the distribution of the amount of wealth behind each child in average daily attendance in the schools. The extremes ranged from $2000 to $77,000 per child, with the median at $6250. Data for the year 1921–22. (After Swift.)

taxation would lead toward a county-unit of administration, the abolition of small schools, and the erection of a few large consolidated schools that would, in a short time, change entirely the kind of education provided for the rural and village children in this county.

The next step in advance comes when the people of a whole State agree to pool, in part, at least, the costs for the maintenance of what the State has required communities to provide in the interests of the advancement of the welfare of the State, and vote to levy a general State school tax to aid the counties, townships, or districts in the maintenance of their schools. The advantage of a State tax for schools over either town (township) or county taxation is the same in character as that of a county school tax over district taxation, as may be seen from Figure 52, showing the wealth behind each child in average daily attendance in the 355 Massachusetts cities and towns, and from Figure 53 showing the same for the 58 California counties. The equalizing effect of larger general taxation, in either case, is apparent from these figures.

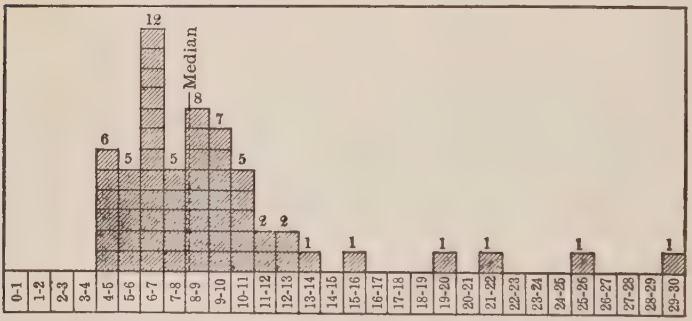

FIG. 53. INEQUALITIES IN WEALTH IN CALIFORNIA COUNTIES

Showing, for the 58 California counties, the amount of wealth behind each child in average daily attendance in the schools, 1920. The median was approximately $8100. On these amounts the California law requires a uniform county school tax of $30 per pupil in attendance to be levied. (After Swift.)

Rise of taxing inequalities. In every State there exist districts, towns, townships, and counties which are poor, and others which are well-to-do. The differences in ability to support a school are often marked as between districts or

townships within a county, and often between different portions of a State. As examples of the latter, eastern and western Massachusetts, or northern and southern Ohio, Indiana, and Illinois may be mentioned. In part these differences in ability are due to natural conditions — soil, hills, streams, climate; in part to the growth of cities and manufactures; in part to the development of hidden natural resources which have enormously increased the value of the land in certain areas; and in part to the evolution of entirely new forms of wealth. In the days when agriculture was the main occupation of our people; when wealth was almost all visible wealth — horses, cows, houses, farms, crops; riches somewhat evenly distributed and nowhere existing in large amounts; the costs for education small and the schools simple in character, a large dependence on local taxation for school support produced somewhat even results. Real and personal property taxes, with poll taxes to catch those who had no property, naturally became the established forms of school taxation, with State aid more to stimulate to activity than for any other purpose.

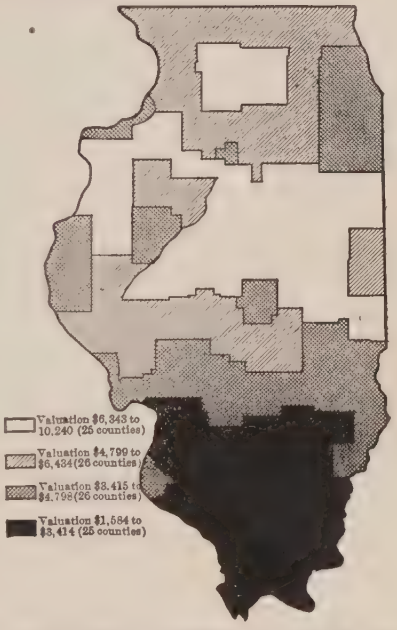
Valuation $6,343 to 10,240 (25 counties)
Valuation $4,799 to $6,434 (26 counties)
Valuation $3,415 to $4,798 (26 counties)
Valuation $1,584 to $3,414 (25 counties)

FIG. 54. FULL ASSESSED VALUATION PER CHILD OF SCHOOL AGE IN ILLINOIS, 1921, BY COUNTIES

(After Reeves.)

Since those simple and somewhat primitive days the whole character of living, wealth, industry, education, and government have changed. The past three quarters of a century, as was described in Chapter II, have witnessed an enormous transformation in the character of the living of our people, and the growth of great inequalities in the distribution of the wealth within the States and the Nation. Railroads have been built in many directions, and where railroads have gone inequalities have arisen, due to the increase in value of property near the lines of transportation and the impetus to the development of cities and manufacturing along them. At junction points important centers of trade and transportation have grown up, and at such points wealth has accumulated rapidly. The discovery and development of the natural resources of the Nation — coal, oil, gas, lead, zinc, copper, and building materials — have greatly increased values in the districts producing these articles. Poor land worth little for agricultural purposes has often become exceedingly valuable overnight. The perfection of electric power transmission has caused the investment of large sums at isolated mountain points and the building of long and expensive power lines along narrow strips of territory, and the same results have followed the development of the telegraph and telephone. The perfection of the gas engine, too, has given birth to the automobile industry, and this — as is common with many other industries — has tended to establish itself in closely adjacent cities.

Inventions, too, have perfected manufacturing processes to such an extent that the industries once practiced in the villages and homes all over the land are now centralized in large manufacturing establishments, located where power is cheap, labor plentiful, and means of transportation easy. Population and wealth, in consequence, are no longer diffused with even comparative equality throughout a town-

ship, county, State, or the Nation, but are to a large extent concentrated at centers of trade and industry. As it is to-day, some communities have a far greater per capita wealth than have others; some are increasing rapidly in their per capita wealth, while in others there is an actual or a relative decrease; and in practically every State an increasing relative if not actual impoverishment of certain communities is taking place.

Essential nature of the problem of school support. Yet in all these communities people live, children are born and need schooling, and young people need to be trained to become intelligent future citizens of State and Nation. The same industrial revolution that developed the inequalities just described has also brought about new political and social needs that make education a greater State and national interest than ever before in our history. These changes have been so far-reaching that the State has been forced to assume a control over education undreamed of in the earlier period of our national life. The scope of public education has been widened and the per capita costs increased, and will continue to widen and increase; far better educational advantages than to-day are provided are needed by millions of children; the State's demands as to compulsory education, length of term, type of teacher, sanitary conditions, and scope of education provided are often as yet but poorly met, and are not likely to be lessened; child-welfare work has really only begun; and better training of our teachers and better supervision of their work are urgently needed everywhere outside our cities.

The general result of these new demands in education has been that the burden of school support, with local taxation and the old property tax as the chief reliance, is to-day greater than many communities can meet. With the maximum tax allowed by law they cannot comply with the mini-

mum demands of the State, low as these demands often are. The taxes to-day levied on farm property often are almost confiscatory in character, yet the education provided for rural and village children is usually far inferior to what it ought to be. Unless there can be a greater pooling of costs for what is so manifestly for the common good, there can be but little hope for better educational advantages for the children who live in the poorer villages and poorer farming sections of the United States.

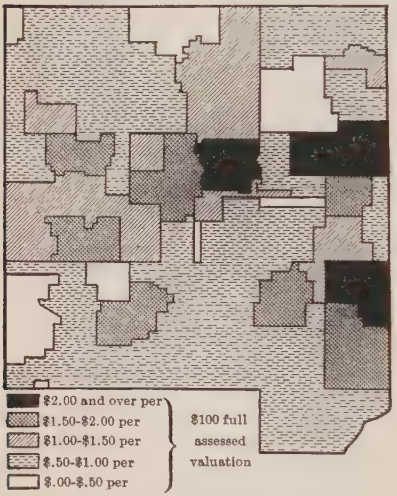

FIG. 55. INEQUALITIES IN TAX RATE FOR SCHOOLS, IN ONE ILLINOIS COUNTY

The areas shown often include a number of districts having the same group tax rate. High-tax areas and low-tax areas exist here side by side. (After Reeves.)

The problem calls for a consideration, too, as to the essential nature of education itself. If education is only or largely a personal or a local benefit, such as telephone service, street lighting, sidewalks, or streets, then education should be provided for by local taxation. Having been conceived, though, as essential to the welfare of the State as a whole — one may well say the Nation as a whole — its maintenance then should be by the general taxation of all. Education is a necessary State service to which all owners of property — all citizens with an income, regardless of the possession of tangible property — must be subject. Nor can any man be excused from contributing his share of support because he chooses to send his

children to a private or a parochial school. This we have left him free to do, but the exercise of such freedom and choice cannot be expected to relieve him from contributing his proper share to the support of so essential a State service as public education.

The remedy for existing difficulties lies in larger administrative and taxing units and in different types of taxation. The costs for anything so vital to the public welfare must be better equalized than is at present the case. This calls primarily for tax reform, the county unit in taxation for education as for other public needs, and for a much larger proportion of State support than now prevails in most States.

The question of national aid for education. Within the past few years the question of some form of national aid for education has been pushed to the front by the work of the National Education Association in promoting what came to be known as the Education Bill. This bill proposed to create a Secretary of Education in the President's Cabinet, and to appropriate annually to the States $100,000,000 to be used for the following purposes:

$7,500,000 to aid in the removal of illiteracy;
7,500,000 to aid in the Americanization of immigrants;
15,000,000 to aid in the adequate preparation of teachers;
20,000,000 to promote physical education and health work; and
50,000,000 to help equalize educational opportunities.

This bill was before Congress for six years, but never came to a vote. In support of it it was pointed out that there are many precedents for such aid in the Land-Grant College Acts, the Smith-Hughes Act, the Smith-Lever Act, the Sheppard-Towner Maternity Act, the Smith-Sears Vocational-Rehabilitation Act, the work of the Agricultural Department, the continual appropriations to the States to aid them in building highways, and many other acts of the

Federal Congress. The inequalities in natural resources as between the States — inequalities that time can never correct; the fact that over one half the national income tax collected is paid by the residents of seven Northern and Eastern States; and the national character of the educational problem were all arguments advanced in favor of the Education Bill. Still further in support of the Bill was cited the fact that illiteracy and Americanization are problems the States have been forced to handle, but for which the emancipation and immigration policies of the National Congress are alone responsible. Despairing of securing approval for this bill, it was finally withdrawn and a new and similar bill, but without the subsidies to the States, was agreed to for submission in its stead. This probably will be approved by Congress without more than the usual delay.

The question finally resolves itself down to the needs of the States for assistance, and the importance of education as a national undertaking. Are the benefits of education local in nature and confined to State lines, or are they in part general and difficult to trace? Is aid for education, socially and nationally, as important as the maintenance of a national fishery commission, the prevention of hog cholera, the elimination of bovine tuberculosis, increasing the percentage of butter fat, the improvement of breeds and yields, the dredging of rivers and harbors, or the construction of highways? Again, if giving national aid for education and helping to provide a better teacher for the school is interfering with the constitutional right of a State to manage the education of its children as it sees fit, as is so frequently urged, is it not also interfering with the right of the people of a State to have hog cholera or cattle tick, or to drive wagons along mud roads, when the National Government enters a State and stamps out disease in the one case and helps to build automobile highways in the other?

The problem is at bottom one of relative values, and of how far our people are willing to pool cost for the maintenance of what is for the common good of all. Some of our States still throw school support back almost entirely onto district taxation; the New England States have advanced to the town; a number of Southern and Western States place but little dependence for support on any unit smaller than the county; a number of States have recently very materially increased the proportion of school maintenance costs paid from State funds; and there is good reason to think that a constantly increasing number of our people are becoming conscious of a national obligation in the matter. Constitutionally and legally there is no reason why the National Government should not aid the States in the maintenance of their systems of public instruction if need can be shown for so doing, while in the light of precedents already established, and from the point of view of sound public policy as well, abundant reasons can be advanced for such action.

The best form for State aid. The question naturally arises here as to what is the best form for use by a State in aiding its subdivisions in the maintenance of their schools. Where the State's income is derived from the old form of property tax, as is still the case in most of our States, a fixed rate, of so many mills or cents, is usually set apart for schools. This amount is commonly subject to legislative determination, and most often bears no relation to the number of children in or the cost of the schools. A few States use instead a fixed annual appropriation — as five millions of dollars, or some fraction, as one third, of the State's revenue — but this bears even less relation to children and costs. The best plan so far evolved is to determine the amount of State aid for schools on the basis of the number of children in the schools, or on some combination of teachers employed and children in attendance. California represents

probably the best example of this plan in use to-day, the constitution there requiring the setting aside annually, from the State's revenues, of a sum equal to thirty dollars for each pupil in average daily attendance in the elementary and high schools the preceding year. This amount is a first charge on the revenues of the State, which are derived largely from

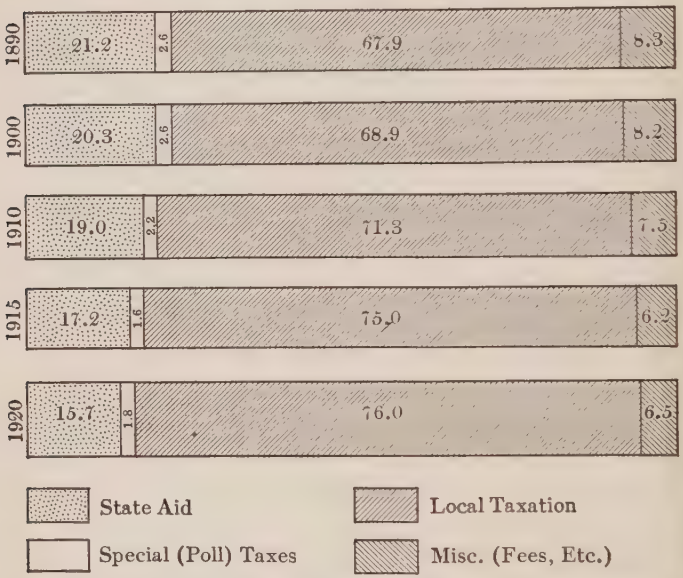

FIG. 56. SOURCES OF REVENUE FOR SCHOOL SUPPORT, 1890–1920

corporation income taxes. In a few other States a somewhat similar plan is used, the amounts being determined by teachers employed, schools maintained, or the insuring of a certain sum per child taught to each school.

Whatever form of grant is made, and from whatever sources the money is obtained, an important element in any State-aid or county-aid plan is that the whole scheme be

kept so flexible that the amounts granted will vary annually with the needs of and the work done by the schools.

Just how large a proportion of the total cost for education the State should provide is as yet an unsettled question, and one capable of different answers in different States. That it should be much larger than at present, in view of the growing costs for education and the marked inequalities in ability to finance schools in the different counties, there can be little doubt. Theoretically it would be more equitable, up to a certain standard at least, if the whole support came from State sources. The entire cost for elementary and secondary education, as well as for normal schools and universities, would then be pooled and laid equally on the wealth of the whole State. Practically it is probably better to lay a certain proportion of the burden locally, and to encourage communities to provide additions to their school work. That at least from forty to sixty per cent of the maintenance cost for elementary and secondary education ought to come from State sources, under modern conditions of wealth distribution, probably would be approved by most students of educational finance. Some students would say seventy-five per cent. The large bulk of the remainder, whether the county unit of school administration is in use or not, should come from general county taxation, and then any additional amounts needed be raised locally.

Double nature of the support problem. The first important step in the maintenance of adequate educational advantages for the children of a whole State has been taken when the people of a State come to recognize a broad and general responsibility for the education of all the children of the State, rather than portions of them here and there. This acknowledgment of general responsibility is evidenced by the establishment of large-area taxing units, and a wide pooling of maintenance costs. This step has been taken, in

theory at least, by nearly all our States, though in most of them the step has not as yet been a very long or a very complete one.

To provide a sound system for raising funds for the support of education, though, is but half the problem. The second important step, and one that but few States have as yet taken, lies in the enactment of laws providing for the distribution of the proceeds of taxation in such a manner as will best attain the ends for which a State system of public instruction has been created. An equitable distribution is not, as is so often thought, an even and impartial distribution, but rather one that takes into consideration needs, costs, and local effort. About one third of our States have by now made some real advances along this line, and about one fifth of the States have worked out a fairly satisfactory plan for the apportionment of their State and county school-aid funds.

Just as there has been a certain general evolution in the theory of taxation for public education, as the people of a State have come to have broader conceptions as to the need for and the purpose of a State system of public instruction, so, similarly, has there been a general evolution in plan for the distribution of the income from permanent school funds and the proceeds of general taxation for schools. Naturally, all States have not passed through the same stages in the development of their taxation and distribution systems, nor will the ultimate goal of all be the same. The peculiar educational needs, economic resources, political institutions, and administrative units and governmental forms of the States have all served to modify development and the results reached. Still, notwithstanding certain local differences, certain general principles hold with reference to the proper distribution of State and county funds for the support of education. Certain bases for the distribution of the

money are better than other bases because they take into consideration factors that the latter neglect, because they tend to equalize better both the burdens and the advantages of education, and because they place higher premiums on the maintenance locally of schools of a superior type.

Bases for apportioning school funds. The most commonly used basis for distributing school funds is the old school-census basis — that is, to apportion the money to the counties, and to the school districts, in proportion to the number of children of the so-called school-census age reported as living in each. When this first began to be employed, about seventy-five years ago, it was hailed as a great advance, as it undoubtedly was. Before that time the general plan had been to give the school taxes back to communities in proportion to the amounts each had paid. This, of course, produced no equalization, and was nothing more than compulsory local taxation. Somebody hit upon the idea of using, instead, the number of people in a community, and the number of children of school age came as the natural next step. This seemed at first to be about perfect. Money was raised in proportion to wealth, and distributed in proportion to the children to be educated. So valuable did this new discovery appear that many States amended their constitutions to fix the plan, and thus prevent the legislatures from ever going back to the taxes-where-paid basis. To-day these constitutional provisions stand in the way of the adoption of a better plan, now that the weakness of the school-census basis has been so clearly revealed.

The great defects of this basis of apportionment lie in that it bears no relation to educational costs or to effort made. The cost for the maintenance of a school of ten, twenty, thirty, or forty pupils is the same, namely, one teacher; while the tax rates for schools, the wealth behind each teacher employed, the length of term provided, and whether

or not the children are in school, are points entirely ignored. The basis does not offer a single educational incentive to any community; the only inducement it does offer is to get every possible name on the annual school-census lists. In fact the smaller the percentage of census children who enroll in the school the better off the community is. The school-census basis, too, fails in that equalization of burdens and advantages for which a general pooling of costs has been made. The basis has no educational significance, places no premium on any worthy effort, rewards most those who do least, and its general abandonment as a basis for the apportionment of school funds is much to be desired.

The most useful basis dealing with children is to pay in proportion to the number of children in average daily attendance in the schools. In a few States aggregate days' attendance is used instead. The important consideration now becomes the number of children in the schoolrooms each day, and the State (or county) does not pay for those not there. A premium is now placed on a number of educational efforts of importance. Good as attendance is as a basis, however, it has certain defects.

Since from sixty to ninety per cent of the current cost for education is for the salary of the teacher, and since the number of teachers needed to teach anywhere from five to forty children is the same, namely, one teacher, a few States have taken the teacher, instead of the children, as the unit for use in apportionment. Under this basis all schools start alike, the money being divided in proportion to the number of teachers employed, or determined by some artificial means. The advantage of the teacher-basis lies in that it results in a better equalization of burdens and advantages than does any children-basis, because it apportions the money on the chief item of cost in school maintenance. It is a definite item, is equally just to large and small schools, pays exactly

in proportion to the efforts made by communities in providing teachers for their schools, and is automatically adjustable to changes in a school system. It does not, though, place any premium on regularity of attendance, length of term, or efforts to build up a school system in anything except number of teachers employed. Combined, however, with the attendance basis — say two thirds of the money on teachers and one third on attendance — it offers probably the best simple combination of bases that can be used.

Relation to effort and need. All the commonly used bases for the apportionment of school funds rest on pupils, teachers, or types of instruction (elementary, high, vocational), and do not consider either the cost of the instruction to the local community or its ability to bear the burden. The equalizations attempted have been in terms of pupils and teachers, and not in tax rates. As the tendency generally has been to limit the tax rate for education, and at the same time to increase the State educational requirements, it frequently happens that a school district or a township is unable to maintain the type of school the State requires within the tax limits allowed by law. This condition has called for remedial legislation.

The simplest remedy employed has been to give extra State aid to those communities which have made the maximum tax-effort allowed by law and still cannot meet the minimum requirements of the State, and in amounts sufficient to enable them to do so. Before any State money is distributed on teachers, attendance, or other basis, a Reserve Fund is first created to aid poor districts by setting aside from five to ten per cent of the total fund to be distributed. This fund is then awarded, usually by the State Board of Education, to those districts needing extra help to enable them to meet the requirements of the school law.

This is simple justice. The State must often advance requirements as to education without regard to whether certain poor communities can meet these requirements unaided. The needs of the State are paramount, and laws must be made with these needs in view. Having done this, if the requirements prove too heavy for certain poor districts, then the State should grant them extra aid to enable them to comply with the law. A few States, notably New York and the New England States, have gone further and have taken into consideration assessed valuation, total tax rates, and the tax rate for schools, and then have divided the extra aid in proportion to needs and efforts made. This makes a rather complicated apportionment plan.

Fundamental conceptions. As the prime purpose in general taxation for education is the pooling of effort on as large a scale as is possible, so the purpose to be achieved in distributing the proceeds of taxation is the equalization, so far as can be done with the money at hand, of both the advantages and the burdens created by the maintenance of a system of public instruction by a State. The problem for the State is to determine how far this can be done with the funds available for the purpose. If the aid to be given by the State is small, then all the more care should be exercised that it is distributed, both to the counties and by the counties to the townships or districts, in the most intelligent manner possible.

The State aid given should be made to relieve as much excess burden and buy as much in local effort as can be done. The plan or combination of plans employed should place as much premium on such educational efforts as attendance, length of term, good teachers, extra educational advantages, and the making of a good school as can be done. Both the taxation and the apportionment plan employed should be such as to respond promptly to any change in need, in either

direction, thus rewarding effort and penalizing failure. All attempts at the equalization of both the advantages and the burdens of education have as their foundation the conception that education is an important State interest, the costs for maintaining which should be in some good measure equalized. Equalization would be promoted, as would many other phases of the educational problem, were the county and the city to be made the units for local taxation, rather than the little school districts.

The scope of this chapter. The problems of this chapter have been those of taxation for education, and the apportionment of the proceeds of taxation to the subordinate units of the State. The subject-matter of this chapter forms a division in a course commonly given in colleges and schools of education and known by the name of *State School Administration*. The subject is studied still more in detail in a university course in *Educational Finance*.

So far as the particular plan of any one State is concerned, this is often taken up in local courses in *State School Law*, or *The State School System*, as given in the normal schools and teachers colleges of particular States.

QUESTIONS FOR CLASS DISCUSSION

1. Does every great advance in provisions for human welfare require a period of education and propaganda? Illustrate.
2. Show how, with the beginnings of State aid, general State requirements as to education could be enforced for the first time.
3. We pool administrative costs in a county — roads, poor relief, government, enforcement of law, courts and justice; why, then, is there so much objection to the pooling of the costs for education?
4. We have relatively uniform charges throughout a State for telephone service, electric light and power, gas, and railway fares; are not these examples of the pooling of costs as much as a State tax for education?
5. Show what is meant by the break-down, under present conditions, of the real and personal property taxes as a means of supporting government.
6. Why is a large dependence on these so unjust to the farmer and small home-owner?

7. Show the necessity for larger State support if proper educational advantages are to be provided for the children of a State.
8. Many men with good incomes pay almost no direct taxes for education, because they live in rented quarters and spend each year nearly all they make. How can such persons be made to contribute their proper share of the costs for education?
9. Some men think they should be excused from taxes for schools because they send their children to a private or parochial school. They claim that they are forced to pay twice. Should they? Are they?
10. Suppose a man should ask to be excused from paying taxes for a fire department, because he has a fireproof house, or for the health department, because he employs a family physician. Are these analogous cases to question 9?
11. Show how Americanization, negro illiteracy, and citizenship problems are essentially national problems, which the States have been forced to handle but for which they are not responsible.
12. Show, by illustrative cases, how the school-census basis pays most to communities that do least.
13. Enumerate the educational efforts upon which a premium is placed by the apportionment of funds on a combined teachers-employed and average daily attendance-basis.
14. Show why a State must often order advances in educational provisions when it knows that certain communities cannot meet the requirements, and how this in turn involves responsibilities.

EXERCISES AND PROBLEMS

1. Take the different school districts given in Figure 51; assume each to have ten children to be educated, and the maximum wealth for the bracket in which they are located. Figure the tax rate necessary for one district in each group to produce $800 to run the school for one year.
2. Take Figure 53, giving wealth per child for each of the California counties. The State law requires a county school tax equal to $30 per pupil in average daily attendance. Figure, for one county in each bracket, on the basis of maximum valuation for each, the tax on each $100 of property necessary to raise $30 per pupil.
3. Make an analysis of your State and locate the marked inequalities in taxing power within it, and state the reasons for these differences.
4. Outline a plan for the apportionment of school funds by the State that will be quick to reward effort and to penalize failure.
5. Show how the census basis fails in these respects.
6. Analyze the apportionment plan in use in your State, and estimate its merits and its defects.

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Clark, H. F. *The Cost of Government and the Support of Education.* (87 pp.)

*Cubberley, E. P. *School Funds and their Apportionment.* (255 pp.)

*Keith, J. A. H., and Bagley, W. C. *The Nation and the Schools*, chaps. XI, XII, XXIII.

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*National Education Association. *Financing Public Education.* (47 pp.)

*National Education Association. *Research Bulletins*, vols. I, II.

Newcomer, M. *Financial Statistics of Public Education in the United States*, 1910–20. Vol. VI, Educational Finance Inquiry Reports. (1924.)

*Pittinger, B. F. *An Introduction to Public School Finance*, chaps. I, II, IX, X.

*Swift, F. B. *State Policies in Public School Finance.* (54 pp.) Bulletin 6, 1922, U.S. Bureau of Education.

*Swift, F. B. "Biennial Survey of Public School Finance"; in *Biennial Survey of Education in the United States*, 1920–22. Bulletin 47, 1923, U.S. Bureau of Education.

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*State School Surveys. Almost any one of these will contain useful materials.

CHAPTER XXIII

THE INCREASING SIZE OF OUR EDUCATIONAL PROBLEM

The development of fifty years. After about 1875, public education in the Northern States at least may be said to have become firmly established in the minds of our people, and the marked expansion of the school had begun. In the Southern States, due to the impoverishment caused by the Civil War, it was a quarter of a century later before any marked development in public education took place, but since about 1900 the South has experienced a remarkable educational revival. Since about 1900 everywhere — North, South, East, and West — the people have adopted the school as a great public undertaking, and its growth and development and expansion has been rapid indeed. This

TABLE IV. THE DEVELOPMENT OF PUBLIC EDUCATION

YEAR	Per cent children 5–18 yrs. enrolled	Per cent of pupils in high school	Per cent enrolled attending each day	Average number days of school	Cost for per capita of total population	Cost for per pupil in average daily attendance
1869–70...	57.00	1.2	59.3	132.2	$1.64	$15.55
1879–80...	65.50	1.1	62.3	130.3	1.56	12.71
1884–85...	67.96	1.4	64.0	130.7	1.96	15.12
1889–90...	68.61	1.6	64.1	134.7	2.24	17.23
1894–95...	71.54	2.5	67.0	139.5	2.55	18.41
1899–00...	72.43	3.3	68.6	144.3	2.84	20.21
1904–05...	70.35	4.1	69.7	150.9	3.53	25.40
1909–10...	73.49	5.1	72.1	157.5	4.64	33.23
1914–15...	74.57	6.7	76.1	159.4	6.03	40.43
1919–20...	77.80	10.2	74.8	161.9	9.80	64.16
1921–22...				164.0		85.76

growth in popular favor may be made clear by a few statistical facts, taken from the Reports of the United States Commissioner of Education, and covering the United States as a whole.

In the same period of time as the above, namely, since 1870, the total enrollment of pupils in all schools has increased only twenty per cent, while the number of schoolhouses has increased two and a half times, the number of teachers in them three and a half times, the value of the school property used nineteen times, the average annual salary of the teacher employed four and one half times, and the average expenditure per day per pupil in average daily attendance three and one half times.

Another way of measuring the change in attitude toward public education that has taken place is to compare the total expenditures for education for the same period. Doing so we get the totals given in the marginal table. The total expenditures here include new sites and buildings, as well as all annual maintenance charges. The division between the two, over the past thirty-five years, has been from fifteen to nineteen per cent for buildings and sites, and from eighty-one to eighty-five per cent for maintenance charges.

TABLE V. TOTAL COST FOR EDUCATION IN THE UNITED STATES

1869–70	$63,396,666
1879–80	78,094,687
1884–85	110,328,375
1889–90	140,506,715
1894–95	175,809,279
1899–00	214,964,618
1904–05	291,616,660
1909–10	426,250,434
1914–15	605,460,785
1919–20	1,036,151,209
1922–23	1,580,682,187

Recent attempts to estimate cost increases. The recent marked increases in total costs for education are, however, more fictitious than real, due to the great increase in cost for all forms of labor, and service, and materials which followed

the outbreak of the World War in 1914, and the corresponding increased income of our people. The year 1913 is therefore our last normal year, and costs since then, for comparison, need to be materially scaled down. The United States Bureau of Education has recently attempted to compare expenditures in 1913 with those since, using the index of the cost of living to compare the purchasing power of the dollar, with the following results:

TABLE VI. TOTAL COST IN RELATION TO PURCHASING POWER

YEAR	TOTAL EXPENDITURE (in millions of dollars)	INDEX OF COST OF LIVING	RESULTING PURCHASING POWER (in millions)
1913	526	100	522
1918	762	174	438
1920	1034	200	518
1923	1580	173	913

Cost of living considered, these figures would seem to show that we were not expending relatively as much on education in 1920 as we did before the outbreak of the War, and that it is only since 1920 that we have really begun to increase, relatively, our educational expenditures.

The Research Division of the National Education Association has also recently published figures giving much the same comparison for the ten-year period from 1913 to 1923, as shown in the diagram given in Figure 6, page 43. This analysis showed that, though the total cost for education (including sites and buildings) increased from $521,546,000 in 1913, to $1,580,682,187 in 1923, all but twenty-nine per cent of the increase was absorbed by increased attendance at the schools and the depreciation of the dollar.

Yet, despite these figures showing how the great increases in costs for education have in large part been caused by other factors than an expansion of the school system itself, we nevertheless know that the demand for additional educational advantages, since about 1910, has been very great. Not only has a better and a greatly enlarged school plant been provided, but special classes date largely, and the junior high-school development almost entirely, from about 1910, while the high schools and colleges have doubled their enrollment since that time. We must accordingly conclude that the school has spent its percentage for increased facilities very carefully, and has obtained much more in educational advantages for the children than cost of living comparisons would seem to indicate. A much larger proportion of the additional money than the public has any reason to expect has gone to providing better educational facilities for the children in the schools.

Where some of the increased costs have gone. A number of studies have been made to determine where the main increases in costs have occurred. Aside from increased costs for building construction, both in labor and materials and type of building needed, and much needed increases in the salaries of teachers and principals, there have been other great additional costs because education to-day is expanding most rapidly at the places where the cost per pupil is largest. The expansion of our schools during the past two decades has not been an even growth, but largest at the top and at the sides.

A study recently made of the increases in one of our larger cities is typical of the results generally. While the city increased 42 per cent in total population, from 1913 to 1923, the attendance at the schools as a whole increased 82 per cent. This, however, was not an evenly distributed increase. The elementary schools increased only 54 per cent in attendance, while the junior high schools increased 145 per cent, the senior high school 173 per cent, and the special

classes — organized to adjust education better to pupil needs — 818 per cent. The result was an increase of 113 per cent in the cost for maintenance, with only an 82 per cent increase in attendance in the schools.

While the tendency to persist longer in school which this study reveals has been very marked within the past ten to fifteen years, it is a tendency which has been in evidence for a long time. During all our educational history the amount of education obtained by the masses of our people has been slowly increasing. In 1870, but 5 per cent of our young people obtained any high-school education, whereas 35 per cent of our youth now receive some. In 1870, but 3 per cent of the pupils went halfway through the high school, whereas 24 per cent now do, and 1 per cent then graduated compared with 14 per cent now. Further, more students attended college in 1920 than attended high schools in 1870, and the percentage of college students in State universities was twice as large in 1920 as in 1890. Whereas the average level of education of our people in 1870 was probably near that of the fifth grade, at present it is probably about the seventh grade, and is constantly rising.

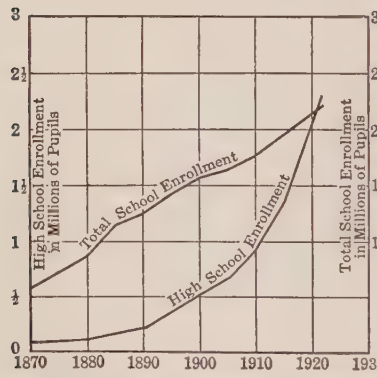

FIG. 57. SHOWING RECENT RAPID GROWTH IN HIGH-SCHOOL ENROLLMENT

The remarkable recent increase in high-school enrollment, which more than doubled between 1910 and 1920, is shown in Figure 57, and the relation of the high-school enrollment to total school enrollment also is shown. There is no reason to expect the curve for high-school attendance to do other than continue upward

in the future, and this means increased cost. It does not seem too much to say that it is probable that before long America will extend the opportunity to complete a full high-school course of study — cultural, scientific, or vocational — as a birthright to every boy and girl able to profit by such training. Our cities now do so along cultural and scientific lines, and are rapidly extending the vocational work as well. Once a reorganization of rural education is effected along intelligent lines, similar provision can be made for every boy and girl on the farms and in the villages and towns.

The expansion of the school sidewise — that is by the organization of special classes to meet special needs — has been another cause for large increased costs. These classes have been exceedingly useful in handling those defective or peculiar children who do not fit well into the ordinary school work, but they cost much more per pupil to maintain than does the regular classroom work. In fact, practically every adaptation of the school to individual needs both enhances its value and increases its cost to society.

The burden of these costs on our people. While the costs for education, as for almost every other function of government, have increased rapidly in recent years, and there is no reason to think that the costs for education at least can do other than continue to mount, it is of importance for us to know what proportion of the costs of government go for education, and how much of a burden on the income of our people the maintenance of a system of public instruction lays. Fortunately we have some recent studies on these points that are very valuable.

In a recent study for the Educational Finance Inquiry Commission, Miss Newcomer considered these questions in particular, both for the Nation and by States. Distributing the costs for education and for all government on a per-capita-of-the-total-population basis, she obtained the following results:

TABLE VII. PER-CAPITA EXPENDITURES FOR GOVERNMENT IN THE UNITED STATES, BY YEARS

DIVISIONS AND ITEMS	1900	1910	1920
All governmental expenditures [a]	$30.82	$37.53	$97.87
For national defense	4.67	4.52	44.52
For education	5.42	7.12	11.54
For highways	3.39	4.71	7.75
For all other purposes	17.35	21.17	34.06
National expenditures only	9.98	10.60	57.83
For national defense	4.67	4.52	44.52
For education	.13	.14	.59
For highways	.005	.01	.34
For all other purposes	5.18	5.93	12.38
State expenditures only	3.58	5.09	8.55
For education	1.35	1.65	2.58
For highways	.16	.65	1.88
For all other purposes	2.07	2.79	4.09
Local expenditures only [b]	18.38	23.22	33.75
For education	4.89	6.42	9.99
For highways	3.30	4.23	6.23
For all other purposes	10.19	12.57	17.53

[a] This sum is smaller than the combined State and local expenditures by the amount of Federal and State subventions. These have been added in at the proper places, but subtracted from the total to avoid double counting.
[b] County, township, city, and town.

Comparing further the total expenditures for Government with the estimated annual income of our people, Miss Newcomer found the following ratios:

TABLE VIII. RATIO OF GOVERNMENTAL EXPENDITURES TO INCOME, BY YEARS

DIVISIONS	1900 (per cent)	1910 (per cent)	1920 (per cent)
Total of all expenditures	9.0	10.3	14.2
State and local expenditures	6.1	7.4	5.8
Total educational expenditures	1.6	2.0	1.7
State and local educational expenditures	1.6	1.9	1.6

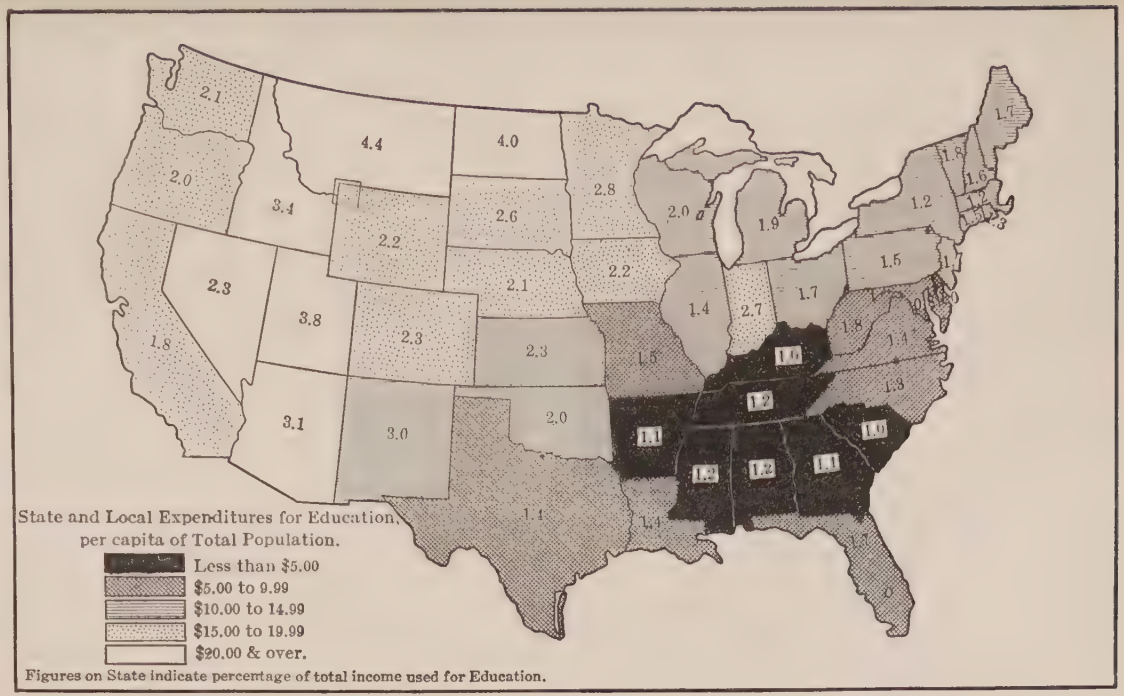

FIG. 58. EXPENDITURES FOR EDUCATION AND INCOME COMPARED, 1920

Finally, Miss Newcomer compared the expenditure for education per capita of the total population, by States, with the percentage of the total income of the people used for education for the same year (1920), and obtained the results shown on the map reproduced on page 443.

This study would not seem to indicate that education is any heavy burden on the income of the people of most of our States. Still more, it shows that the heaviest burden on income and the largest per-capita expenditures are found in the more sparsely populated Western States. In general, and with but few exceptions, the per-capita expenditures for education closely parallel the proportion of the income of the people devoted to education.

Nor do the figures as to the expenditures of our people for

TABLE IX. ANNUAL BILL FOR LUXURIES AND SCHOOL EXPENDITURES COMPARED, ON 1920 BASIS

United States Treasury Department Estimates

For candy	$1,000,000,000
For tobacco	2,111,000,000
For soft drinks	350,000,000
Perfumery and cosmetics	750,000,000
Theater admissions, dues, etc.	800,000,000
Ice-cream	250,000,000
Cakes, confections, etc.	350,000,000
Luxurious services	3,000,000,000
Luxuries in hotels and restaurants	750,000,000
Luxurious food, delicacies, etc.	5,000,000,000
Joy-riding, races, boxing, pleasure resorts	3,000,000,000
Furs	300,000,000
Carpets and luxurious clothing	1,500,000,000
Automobiles and parts	2,000,000,000
Toilet soaps	400,000,000
Pianos and phonographs	250,000,000
Total for the above luxuries	$21,811,000,000
Spent for education	1,036,151,209

luxuries, as given out by the United States Treasury Department, in a statement under date of June 11, 1920, and based on the income tax returns, indicate that we are bankrupting ourselves in the support of public education. In a statement of the above date the estimates of annual expenditures for luxuries given in Table IX were made. Below the total, the expenditures for education in the United States in 1919–20 are given.

Tax rates for education. Another recent study, made by the Research Bureau of the National Education Association, has attempted to determine what percentage of the wealth of a number of cities, of different sizes, is each year used for education, and for all other governmental purposes. Assessed wealth was used, the basis of assessment was determined, the assessed value was changed into real or actual

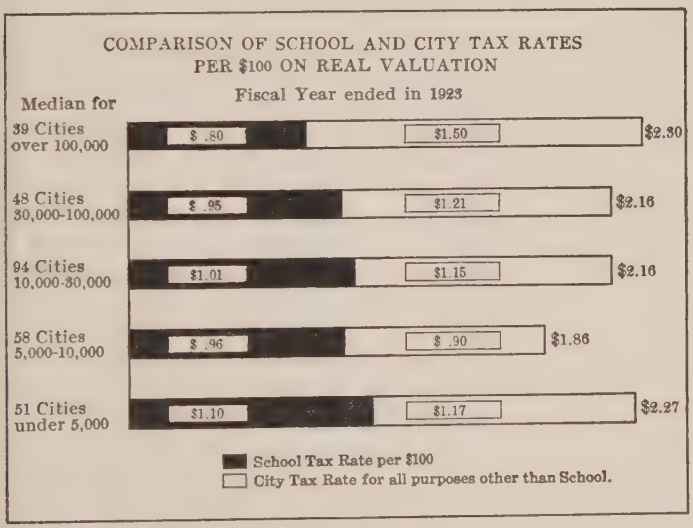

FIG. 59. COSTS FOR EDUCATION AND GOVERNMENT COMPARED, IN CITIES
(After Norton.)

value, and the rate levied on this was determined. The results are given in Figure 59. This shows well the proportion of all city taxes devoted to education. In these cities it varies from 35 to 51 per cent. Adding on the county and State taxes which these cities pay, besides their city tax, education probably required from 25 to 35 per cent of all the taxes paid by the people of the cities studied.

For our States as a whole, the percentage of expenditures for education is less than in the cities, due to the great burden for the support of education being thrown back on local taxation, as was shown by Figure 56, page 426. In the different States the percentages vary from about 2 to 50 per cent, with an average for the United States of about 18 per cent, while in the States making the best provision for education the State support is around 15 to 30 per cent. In general, the high percentages of State support are in States

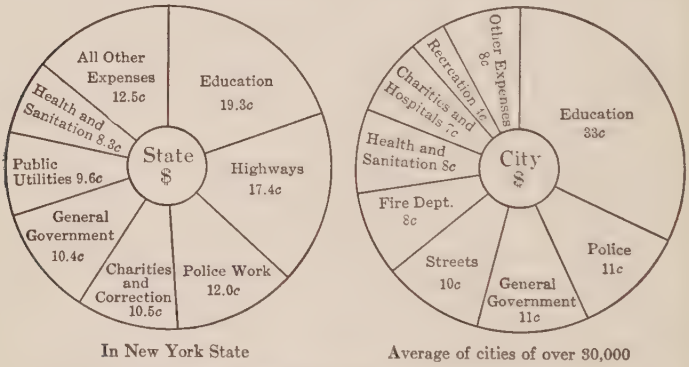

Fig. 60. Where the 1920 Tax Dollar Went, State and City

where the per-capita costs for education are low. While the cost for government in the States has increased so much during the past ten years that everywhere to-day there is a demand for tax reduction, the increase in expenditures has

not been due to any excess proportion of increase for education. In many States education, despite material increases in total costs, has not held its own in percentage of cost for all forms of government. In other words, every other item of governmental expense — highways, health, police, charities, and general government — has also increased, and often at a more rapid rate than has the expense for education. The two circles in Figure 60 show rather common proportional distributions of expense.

Further expansion of the school. With the recent demand for tax reduction the expense for education has been vigorously attacked in certain influential quarters, and it has been claimed that "the cost of the schools is enormous and is sorely taxing the ability of the American people to support them," and that the public school "will be endangered within a comparatively short time unless the cost of public education be brought within a limit of expense which the public can bear." The figures which have so far been given tend to throw doubt on the accuracy of these statements. In view of the figures presented, the whole matter would seem to be more a question as to what the American people want to spend their money for than one of their ability to pay for public education. If an expenditure of a billion dollars a year sorely taxes the resources of a Nation that finds it possible to expend seventeen billions for luxuries and nine billions for other forms of public service, out of a seventy-billion-dollar national income, we then must conclude that education is not that deep interest of the American people that it is so commonly claimed to be. This we do not believe to be the case. Such complaints as to the increasing cost of public education have been common ever since the days when taxation for education first began, and will continue as long as certain people are asked to help pay for something the immediate benefits of which they do not enjoy.

On the other hand, every student of public education knows that the demands of the people for service from the schools are certain to increase rapidly in the years to come. The attendance at even the elementary schools has increased faster, for the past fifty years, than has the total population, and the average school term has increased from 132.2 days in 1870, to 164 days in 1922. With fourteen States still providing an average term of less than 160 days, and eight States less than 140 days, and the general demand for an eight-months minimum term all over the Nation, the cost for elementary education is not likely to decrease. The kindergarten, too, has recently met with much favor, attendance at kindergarten classes between 1900 and 1920 increasing eight times as fast as attendance at the elementary school.

Everywhere, too, the people are asking for high-school facilities for their children, and obtaining them. Between 1900 and 1920 the number of high schools increased from 6005 to approximately 15,000, with probably 16,000 high schools by 1925. The number of teachers employed and the number of pupils enrolled increased 500 per cent in the same twenty years. The percentage of pupils enrolled in public high schools, as opposed to private high schools, increased from 68 to 91 per cent in the same period. The junior high school development has as yet only just been begun, as have also health work, child-welfare work, and the organization of special classes to adapt the school better to individual needs. The recent study of the junior college question seems to indicate the probable rapid development of this new institution, and university education is being sought by increasing numbers and is becoming increasingly expensive each year. Americanization, the elimination of illiteracy, health and physical education, vocational training, opportunity schools, education for better citizenship — these and other new features of education have taken hold of

the imagination of the American people. There is every reason to think, too, that before long a demand for a new type of rural education, with better teachers, longer term, improved instruction, and reconstructed buildings will sweep over the land. The salaries of the teachers in our schools also are certain to increase materially in the years to come. While the average annual salary of all teachers in the United States increased from $195 in 1880, and $325 in 1900, to $871 in 1920, an average of $871 is still far too low for this Nation to pay.

All these developments are certain to increase very materially the cost for public education. When we add to these another large item of further expense caused by the mere increase in the school population, with the growth of the country, it is evident that our people must be prepared to provide large additional expenditures for public education simply to meet the necessary expansions of the school system we now have, and to build the required new buildings of the type now accepted as necessary.

Increased expenditures for teachers. There is still another phase of the problem of increasing educational costs that also will in the near future contribute its quota. In 1920 over one half our teachers, teaching at least one third of the children of the Nation, had not had adequate training for the work in which they were engaged, if we measure adequate training, as is now generally done, by the possession of a high-school education and two years of professional training. By this standard, in one fourth of our States not one teacher in five, and in two thirds of our States less than one half of the teachers employed, had had adequate training for the work of teaching. In but nine States had 75 per cent of the teachers, and in but two States had 90 per cent of the teachers, been adequately trained. Over half a million children are still taught by teachers who have never studied

beyond the elementary school; approximately three million children by teachers who have never been graduated from a high school; approximately two and a half millions by beginning teachers, who work mostly without any supervision; and about the same number by teachers who are too young to be allowed to vote. In the high schools of the United States, taking the country over and as a whole, from half of the teachers in the smaller schools to one third of the teachers in the accredited schools have not had a four-year college course — the minimum accepted standard preparation for teaching in the high school.

That the public will for long continue to permit such conditions to exist may well be doubted. The importance of the problem is now generally recognized, and improvement is under way. The enormous size of the problem is the chief obstacle. Within the past ten years a number of States have, by general law, fixed dates after which all teachers must meet minimum standard preparation. We have, for the past fifty years, spent most of our increased appropriations for education in lengthening the school term, erecting better buildings, expanding the school system in length and breadth, and in enriching the instruction. But little has been spent in improving the teacher. Within the past twenty-five years, though, education has been almost entirely made over and given a new scientific basis, and there is every reason to think that teachers, principals, and superintendents will increasingly be required to give evidence that their professional preparation is at least up to the minimum standards now generally fixed.

That this new demand for properly trained teachers will add largely to the cost for public education there can be little question. A better-educated teaching force demands more teacher-training institutions and more young people in training, and a better trained output will in turn require

a still better salary schedule. Though salaries have been materially increased in recent years, they are still low as compared with other occupations calling for equal preparation. In view of these facts it is impossible to escape the conclusion that much additional money must be put into teacher training, and that the salaries of teachers, principals, and superintendents must be materially increased if we are to secure those of the desired professional preparation for work in our schools. To put an adequately trained teacher in every schoolhouse in the land would probably double the present costs for education, if no other additional expense were involved.

Can the public afford the increased sums? The answer of those having wealth which they do not wish to part with is *No!* Such has been their answer throughout all our educational history. If we were to listen to some of these objectors we might think the Nation is approaching bankruptcy because of the burden for public education. That the burden for support under the old property tax is heavy there can be no doubt, but that, by proper tax reform, the burden can be lightened where it is heaviest now there also can be no doubt.

The best students of public finance give us an opposite opinion. They say that there is plenty of money with which to support any system of public education the people demand, if only our revenue systems are reformed. In an address before the Department of Superintendence of the National Education Association, Professor Seligman recently said:

> Under a modern system of taxation [we shall have] such an immense increase of potential revenues as to satisfy every one, and the embarrassments hitherto found in this country, from the financing of education, will come to an end.

There is no question but that the burden of National, State, and local taxation has increased rapidly in recent

years. Some economies doubtless are possible, but that we shall ever again be a low-tax Nation may well be doubted. We have experienced too fully the benefits in government, security, health, roads, schools, child-welfare, workingmen's compensation, and other forms of service which the increases in taxation have brought us. The problem is to readjust our forms and bases of taxation the better to pool costs, to tax the wealth and income of our people more evenly, and to use the proceeds of taxation more intelligently. As President Wilson well said:

> The people of the United States do not wish to curtail the activities of their government, they wish, rather, to enlarge them; and with every enlargement, with the mere growth of the country itself, there must come, of course, the inevitable increase in expenses.

As has been repeatedly pointed out in preceding chapters, the need of the people of this Nation for a wise and generous system of public education is very great, and the need is increasing as the years go by. More and more we are passing from an agricultural to an industrial Nation, and from an isolated position in world affairs to that of a great world power. That better and more extended education for our children will be called for in the future there can be but little doubt. The confidence of the American people in their schools is one of our most marked characteristics, and there is no reason to think that this confidence will other than deepen as the years pass. On the basis of this confidence our people will place more and more dependence on public education as a means for national safety and progress, and in proportion as that is done the methods for providing what the people demand will be found. The growth of our Nation in material prosperity and power, largely because of the education provided for its people, has been so enormous that we can afford to provide the necessary costs for the maintenance of any undertaking giving us

such large personal, moral, civic, and economic returns. As was said in Chapter III, education with us is in part a replacement and in part an investment, and the investment feature of the undertaking increases in importance with each decade. The growing recognition of this fact by our people forms one of the strong reasons for thinking that the present reactionary movement to reduce school privileges will be but short-lived, and that the great work of the public school lies in the years that are ahead rather than in those behind us.

The scope of this chapter. This chapter is a continuation of the preceding, and deals with costs and current educational finance. Like the preceding chapter, it covers a part of what is contained in a course in *State School Administration*, and the whole question of costs is treated still more in detail in a course in *Public School Finance*.

QUESTIONS FOR CLASS DISCUSSION

1. Assuming Figure 6, page 43, to be correct, show that the schools have made good use of their funds, in view of the many recent demands upon them.
2. What is the significance, socially, economically, and nationally, of the marked increase in high-school enrollment during the past half-century, and especially the past quarter-century?
3. How do you account for the recent great interest in the education of delinquents, defectives, and those having special educational needs?
4. Indicate the educational consequences of an acceptance of the conception that we should give as good an education, as the birthright of every boy and girl, as their particular abilities and needs may require.
5. Is the relative burden on income a better way of estimating costs than tax rate on existing wealth, or not? Why?
6. A citizen with whom you are talking about education says that the costs are becoming too burdensome, and that the people cannot continue to finance the expanding educational program. How will you answer him?
7. Compare the tables on pages 437 and 442, and show the mistake in trying to reason as to the increase in expenditures from total sums.
8. Suppose a State decides that, beginning four or five years in the future, all new teachers thereafter must have standard preparation. What responsibilities must the State be prepared to meet?

9. Show that the development of consolidated schools would be a great aid in teacher preparation.
10. Do you agree with the reasoning of this chapter that the people will continue to finance their faith in education? Give your reasons.

EXERCISES AND PROBLEMS

1. Take any city that you know or can obtain data for, and calculate its expansion over a ten- to fifteen-year period, as was done for the city cited on page 439.
2. Assuming the cost for elementary education as 1, for junior high-school education as 1½, for senior high education as 2, and for special classes as 3, calculate the expansion in costs for a city that developed in attendance as follows:

Division of School	1915	1925
Elementary School	6500	7500
Junior High School	500	1500
Senior High School	800	1600
Special Classes	50	350

3. There was some complaint from taxpayers, in a city of $250,000,000 of assessed wealth, over the erection of a junior high-school building costing $250,000. Suppose the building to have been paid for the year it was built, by a property tax instead of by bonding; calculate its cost to a citizen, for each $1000 worth of his assessed wealth, in terms of: (*a*) cigars at 10 cents each; (*b*) movie admissions at 50 cents each; and (*c*) candy at $1.00 a pound.
4. If you can secure the data, construct a circle for expenditures in your State and city, similar to that in Figure 60.
5. What is the status of the teaching force in your State, as to education and professional preparation?

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CHAPTER XXIV

PROGRESS AND PROBLEMS IN THE ORGANIZATION OF EDUCATION

The development of a quarter-century. There was recently published (1924) a very interesting collection of seventeen articles under the general title of *Twenty-five Years of American Education.* In this volume the different authors traced the development in the different fields of education which had taken place between 1898 and 1923. The volume was an important contribution as showing how old fields had been made over and many new fields created during the quarter-century under review. In fact, the college and university subject of Education, as we know it to-day, has been almost entirely a creation of the past twenty-five years, built on the foundations of the earlier normal school subject called Pedagogy. We have to-day a new history of education, philosophy of education, and educational psychology. The older theory as to elementary and secondary education has been almost entirely reshaped and redirected. School administration has been put into organized form, so that its principles can now be stated. Educational tests and measurements, mental tests, school surveys, vocational education, guidance, and statistical methods and procedures represent recently developed fields of study. In such subjects, too, as school supervision, special methods, school-building standards, curriculum organization, and the technique of school organization and administration, the ways and procedures followed to-day are quite different from those of a generation ago.

In addition to the organization of new fields of study in education, and the reorganization of old ones, much has

also been done, especially in the past fifteen years, in the study of small parts of many of the special fields. Hundreds of Masters' and Doctors' theses have recorded researches in almost every phase of the subject of education, and much important new knowledge has been made available as a result of such work. Studies of costs, school-building needs, learning curves, gifted children, school budgets, janitorial service, education of defectives, scales and tests, training of teachers, the teaching of the different school subjects, salary schedules, teaching efficiency, selection of subject-matter, contents of textbooks, school administration, directed study, promotional rates, juvenile delinquency, supervised study, teacher rating, pension systems, vocational guidance, part-time education, mental growth, retardation, silent and oral reading, apportionment of school funds, the county unit, certification of teachers, minimum essentials, abilities and interests, motor and sensory learning, individual differences, habits and skills, children's interests, building programs, child hygiene, ideals and attitudes, spelling ability, teachers' marks — these are but samples of the range and character of the many studies which have been made within recent years. To-day a dozen educational journals, and more than that many series of educational publications, are given over largely to the printing of the results of hundreds of research workers in the field of education. A mere list of studies under way would each year fill a good-sized volume. Every year, too, the number of research workers in education increases, and every year the training of the workers for educational research grows better and better.

Our present knowledge. Yet with all the work that has been done, and it has been considerable, the field of educational research has as yet hardly been scratched. Only here and there has the plow as yet gone in to any depth. What

we do not know as to the mental development of the child, the effect of instruction upon him, the best subject-matter to use, what constitutes good teacher-training, the real work of the school supervisor, how much education ought to cost, what is the best length of the school day and week, what form of educational organization gives the best returns, what efforts are most conducive to moral and character training what constitutes ability, how to prevent delinquency, the best time for the different kinds of instruction, guidance toward careers — and dozens, yes, hundreds of other topics, far exceeds what we now know. The possibilities for research in education seem almost unlimited.

Some fields, naturally, have been better worked than others. The history of education, for example, has been fairly well organized into form, though hundreds of researches are still possible by way of establishing minor points and building up corroborative facts. The principles underlying proper city school administration, and what ought to be done and why, also seem well organized and established. On the other hand, the fields of school subject-matter and method, teacher training, and the mental development of the child — to cite but a few — are almost virgin fields even though they have been scratched here and there on the surface. The elementary-school curriculum and the organization and supervision of elementary education together offer a field that is one of the most fruitful now before us, and one likely to receive much attention in the next decade. The new subjects of school finance, educational diagnosis, psychology of endowment, vocational education and guidance, and the education of special classes of children are full of problems. Despite all that has been done in city school administration and State school administration, the unsolved problems in these fields are far more numerous than those which have been solved.

Change in attitude toward the problems. Though a few workers here and there before him had tried experimentally to work out the educational problem, it was Pestalozzi who really reduced the problem to form through his attempt to found a school in which the instruction should be based on the natural development of the powers and capacities of the child. These he conceived to be much alike for all children, and he dreamed that he might be able to psychologize the instructional process and reduce it to such an orderly procedure that, once learned, almost any one might become a master teacher. What he was not able to accomplish he died thinking others after him would do.

The problem of education has had, with time, no such simple and easy solution. Instead, with the development of State school systems, the extension of education in many new directions to meet new needs, and the application to the study of education of the same scientific methods which have given such large results in other fields of human knowledge, we have come to-day to have literally thousands of problems, many of which are complex and difficult, and many of which influence deeply the welfare of society and the State. That these problems will have, with time, any such simple solution as that of which Pestalozzi dreamed, may well be doubted. Instead, education is rapidly becoming an applied science of large importance, its work based on sound scientific facts of biology, medicine, hygiene, and psychology, and drawing from finance, administration, sociology, and ethics certain guiding principles that help to shape its work.

The larger problems of the present. Space will be taken here to mention only the larger problems in the more important fields of education as they present themselves to-day.

In city school administration probably the most important problems before us to-day are the saving of the schools from personal and political exploitation on the one hand, and

on the other the question of how to finance the necessary development and expansion. The meaning of efficient city school administration is as yet but dimly understood by the mass of our people, and many have no conception of the fact that inefficient administration results in the children being defrauded, and in a weakened intellectual life and lowered moral tone for the whole city, the influence of which extends throughout the whole life of the generation then in the schools. The penalty often is a higher city tax rate as well.

In State school administration, a whole group of problems relates to the form of administrative organization to be used; the proper educational relationships between the State and the cities and counties and districts; the development of a sound State educational policy; the types of instruction the State should provide, and compel attendance upon; forms of taxation and apportionment; compulsory attendance; child-labor problems; the training, tenure, pay, and pensioning of teachers; problems of child health and welfare; the provision of adequate and professional supervision; continuation and vocational education; school-building control; and the relationship of the State to private and parochial education.

Another important group of problems clusters around the questions of the opening-up of opportunity for youth with brains in any social class to rise and be trained for service; the selection and proper training of those of superior intelligence; the elimination of barriers to the advancement of children of large intellectual endowment; and what it is best to do with and for those of small intellectual capacity. These problems involve questions of grading, promotion, parallel courses of study, special rooms and classes, and the still broader question of how we can make a one-class school system as effective and thorough in its training for leadership as has been the European two-class school.

Another important group of questions hinges about instruction, and relates to the elimination of useless subject-matter; the best organization for instruction; proper aims and ends; moral and civic training; the most economical organization of school work; the saving of time; and what reorganizations of our educational work are desirable or necessary.

Still more in detail, but of large importance, is a group of questions relating to the scientific measurement of the results of instruction; the erection of attainable goals in teaching; the introduction of scientific accuracy into educational work; training for definiteness in thinking; and training of pupils for the more intelligent use of leisure time.

Still another important group of problems relates to vocational training and guidance, and to continuation and technical education, as the proper solution of these problems has an important bearing on our national happiness and prosperity. The readjustment of our school organization the better to meet the changed and changing conditions of our national life — social, industrial, political, religious, economic, scientific — brought about by the industrial, social, scientific, and political revolutions which we have experienced, represents another phase of this same group of problems.

Health problems, child-welfare problems, the recreation of youth, the extension of the service of the school, and the better organization of its various activities for citizenship ends, these represent another group of problems of importance. Our task is to train our children in good health habits; to disseminate sound ideas as to child hygiene and physical welfare among our people; to train our adults to recognize the importance of remedial procedures, and to give early attention to danger signals; to expand the play activities of children into a well-organized plan for physical de-

velopment; and to connect all such instruction with the daily life of our people as expressed in nutrition, sanitation, ventilation, physical care, food, clothing, sleep, and health habits generally. Every year we lose by death, from purely preventable diseases, five times as many of our people as our entire losses due to our participation in the World War, while the preventable loss in industry of time and earnings from largely preventable illness would pay for a national health service beyond our fondest dreams.

Another group of problems of increasing importance centers about the teacher in the schools, and relates to the professional training, selection, organization, supervision, improvement, load, tenure, salary, pension, health, community relationships of the teacher, and the ethics of the teaching profession. A book has recently appeared which concerns itself with these problems only, under the title of *Problems of the Teaching Profession.*

The provision of adequate finance for a growing and expanding school system, and a much better equalization of both the burdens and the advantages of education than exists at present, represent another group of problems of fundamental importance. Closely connected with the problem of finance is the provision of a well-educated and adequately-trained teacher for every child in this Nation. That such a type of teacher can be produced in teacher-training institutions we now know; the question is how soon, by means of tax reform and better school support, our people will provide such a teacher generally. For the rural schools such a teacher is possible generally only through the abolition of the district unit of administration and support, and the establishment of properly organized and located consolidated schools.

How to increase our governmental efficiency on the one hand and individual responsibility for good government on

the other, while at the same time retaining our democratic life and that training which develops initiative, force, and foresight, is another important educational problem. Just where the division between personal initiative and independence on the one hand and discipline on the other is to be drawn is a question. If good citizenship is the fundamental problem, then a large place must be found in our schools for the play of individual initiative, and much must be left to self-imposed control. There are times, though, when discipline imposed from without must play an important part. The problem is to find the proper dividing line, as both liberty of action and self-imposed discipline are the important educational ends.

The above represent some of the more important new problems in education which have come to challenge us since the days when the school was taken over from the Church and transformed into the great constructive tool of the State. Their solution will call for careful investigation and experimentation, and much clear thinking, and before they are solved many other new problems will arise. So probably it will ever be under a democratic form of government, where nothing can remain for long fixed in type and uniform in character.

Education and the State. During the past century we have slowly changed education, in the conceptions of the people of this Nation, from a local and a personal affair to a State affair, in which all have a common interest. During the past half-century, in particular, this idea has been built up in the minds of our people, and to-day we conceive of education, in theory at least, as something maintained by the State and as maintained as an exercise of the State's inherent right to preservation and improvement. The problem of the next quarter of a century, perhaps, will be similarly to establish public education in the minds of our

people as a great national undertaking, in which the States coöperate to provide something of deep and fundamental importance for the welfare of the Nation as a whole. We have reached the state in the evolution of our American school system when narrow local control and support, and even centralized State control and support, must at least be supplemented by a broader national participation in the work of education.

A hundred years ago the school was of but small importance in the life of the State; to-day its proper maintenance has become the prime essential to good government and national progress. In this hundred years the school has been transformed from a little district institution, for the teaching of the simplest tools of learning, into a great State undertaking for the preservation and advancement of the intelligence of the people and the promotion of the welfare of the Nation. Under a democratic form of government such as ours, with the many new problems — internal and external — confronting it, the education of the people in a series of State schools, animated and directed by a national purpose, becomes the greatest of all constructive undertakings for the promotion of the national welfare, and it is from this broad national point of view that our people must next be made to see the school.

Education to-day has been changed from a simple teaching process, as it used to be conceived, to an intricate and difficult instructional procedure, requiring careful professional preparation on the part of those who exercise control, and so intimately connected with national strength and national welfare that it may truthfully be said to have become, in many respects, the most important constructive undertaking of a modern State. Many forces must coöperate in the work of nation building, but unless the schools are clearly conscious of national needs and purposes they fail to

realize their largest possibilities for usefulness. In a democratic form of government such as ours, the public school is the greatest of all institutions engaged in the promotion of the national welfare, and the teachers in our schools render an inconspicuous but a highly important national service. It is not too much to say that upon the public school teacher, and upon those who direct the policies of our schools, rests the burden of the future of our free democratic institutions and the welfare of our national life.

QUESTIONS FOR CLASS DISCUSSION

1. Show why, in such a civilization as ours, the educational problem naturally increases with the years.
2. Show how Pestalozzi's thought of being able to work out a solution for the whole educational problem was a natural one for the time in which he lived.
3. Add two or three other unsolved problems to the list given.
4. What do you understand to be meant by "making a one-class school system as effective and thorough in its training for leadership as the European two-class school"?
5. Show how modern tendencies in discipline and school control are in the direction of the development of individual initiative and self-imposed control.
6. How do you explain the fact that the training of teachers has been better looked after in intelligent monarchies than by democratic States?

EXERCISES AND PROBLEMS

1. Take any three unsolved problems, as listed, show the elements lacking, and suggest a method for attempting a solution for each.

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